NO LONGER IN USE
DELETE

OFFICIAL USE ONLY
Permise No. 03/17/A/0107
Source No. P/018

APPLICATION FOR PERMIT PROCESS

Facility Name: Swan Rubber-Div. of Amerace-Esna
Person to Contact: Jack McCoy

Facility Address: Beal Avenue
Mailing Address: Beal Avenue

City, Village or Township	Street / County	Zip	City	State	Zip
Bucyrus	Crawford	44820	Bucyrus,	Ohio	44820

Telephone: 419-562-1011 (Area Code / Number)

This application is submitted for:
- ☐ Permit to operate an existing source
- ☐ Permit to construct a new source or modify an existing source
- ☒ Variance from regulation(s) _____ for _____ months

Check-list of information to accompany this application:
- ☒ Plans and drawings
- ☐ Emission tests or calculations
- ☒ Process flow diagram
- ☐ Compliance time schedule
- ☐ Construction schedule
- ☐ Additional information

Name of process: Reclaim blenders (Rubber) Rubber Strainers — Year installed: 1954, 64 / 1951, 64
Product of this process: Rubber reclaim
Process equipment: Ribbon blenders & extruders — Your identification: _____
Manufacturer: Farrel — Make or model: 7"
Capacities (lbs/hr): Rated _____ Maximum _____

OPERATING INFORMATION

Normal operating schedule: hrs/day 24 days/wk 5 wks/yr _____
Percent annual production (finished units) by season: Winter 25 Spring 25 Summer 25 Fall 25
Hourly production rates (lbs): Average _____ Maximum _____
Annual production (indicate units) 19,309,000#
Projected percent annual increase in production _____
Method of exhaust ventilation: ☒ Stack ☐ Window fan ☐ Roof vent ☐ Other, describe _____
Type of process: ☒ Continuous ☐ Batch
If batch, minutes per cycle _____ minutes between cycles _____
Does process involve any of the following (check all applicable)? ☐ Lead ☐ Asbestos ☐ Beryllium ☐ Mercury
Materials used in process (include organic materials)

List of Raw Materials	Principal Use	Amount (lbs./hr.)

This application must include a detailed process flow diagram. Show entry and exit points of all raw materials, intermediate products, by-products and finished products. Label all materials including airborne contaminants and other waste materials.

Important Note: If emissions from this source have been determined by source tests, material balances or emission factors, include such data and supporting calculations with application.

RAW MATERIALS

RUBBER RECLAIM

DESCRIPTION	TOTAL	LB/HR
Tires with beads	12,750,000 lb.	2,213.541 #/hr.
Debeaded tires	200,000	34.722
Cab tire scrap	40,000	6.944
MR	2,000,000	347.222
Dark aromatic pet plasticizer	(L x 777) 204,000 gal.	35.416 gal/hr.
Reclaiming agent	20,000 lb.	3.472 lb.
Reclaiming oil (solvenol #2)	24,000 gal.	4.166 gal/hr.
Reclaiming oil (hercosol 8550)	72,000 gal.	12.500 gal/hr.
Ground bituninous coal (Austin)	250 ,000 lb.	43.402 lb/hr
Ground whiting	7,285,000 lb.	1264.756 lb/hr.

OFFICIAL USE ONLY
Emission No. 03/17/01/0107
Source No. S/086

DATA SHEET
STACKS AND OTHER EGRESS POINTS

Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue Mailing Address Beal Avenue
Street Street

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011
Area Code Number

Type: [X] Round [ ] Rectangular - top inside dimension(s) (L & W or Diam.) 27" Dia

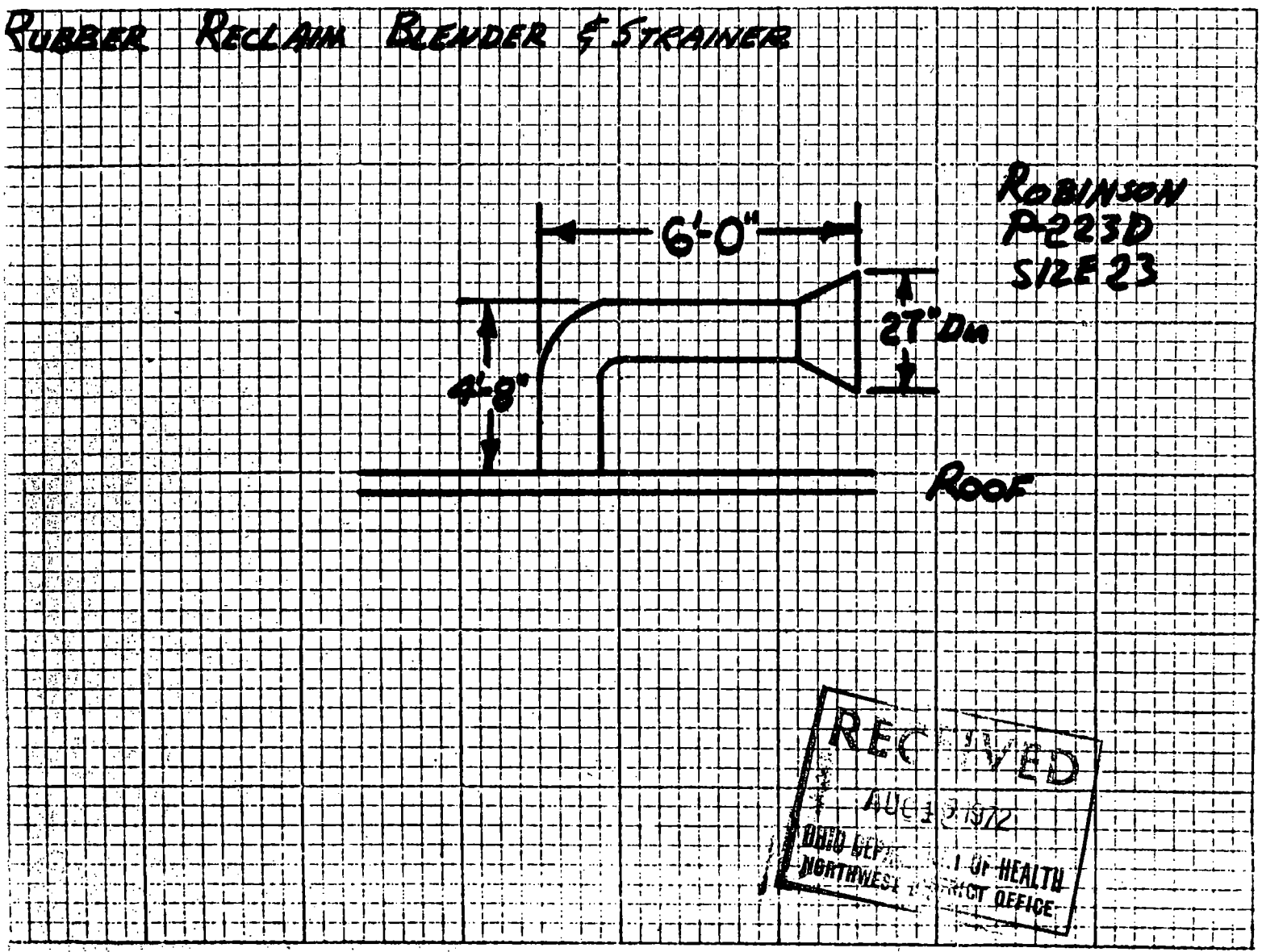
Height: Above roof 4'-8" ft. Above ground 18'-5" ft.

Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____ feet per minute

Continuous monitoring equipment: [ ] Yes [X] No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

OFFICIAL USE ONLY
Misc No. 03 17 01 0102
Source No. S1087

DATA SHEET
STACKS AND OTHER EGRESS POINTS

Facility Name: Swan Rubber Division of Amerace-Esna — Person to Contact: Jack McCoy

Facility Address: Beal Avenue (Street) — Mailing Address: Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone: 419-562-1011 (Area Code / Number)

Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 16" DIA.

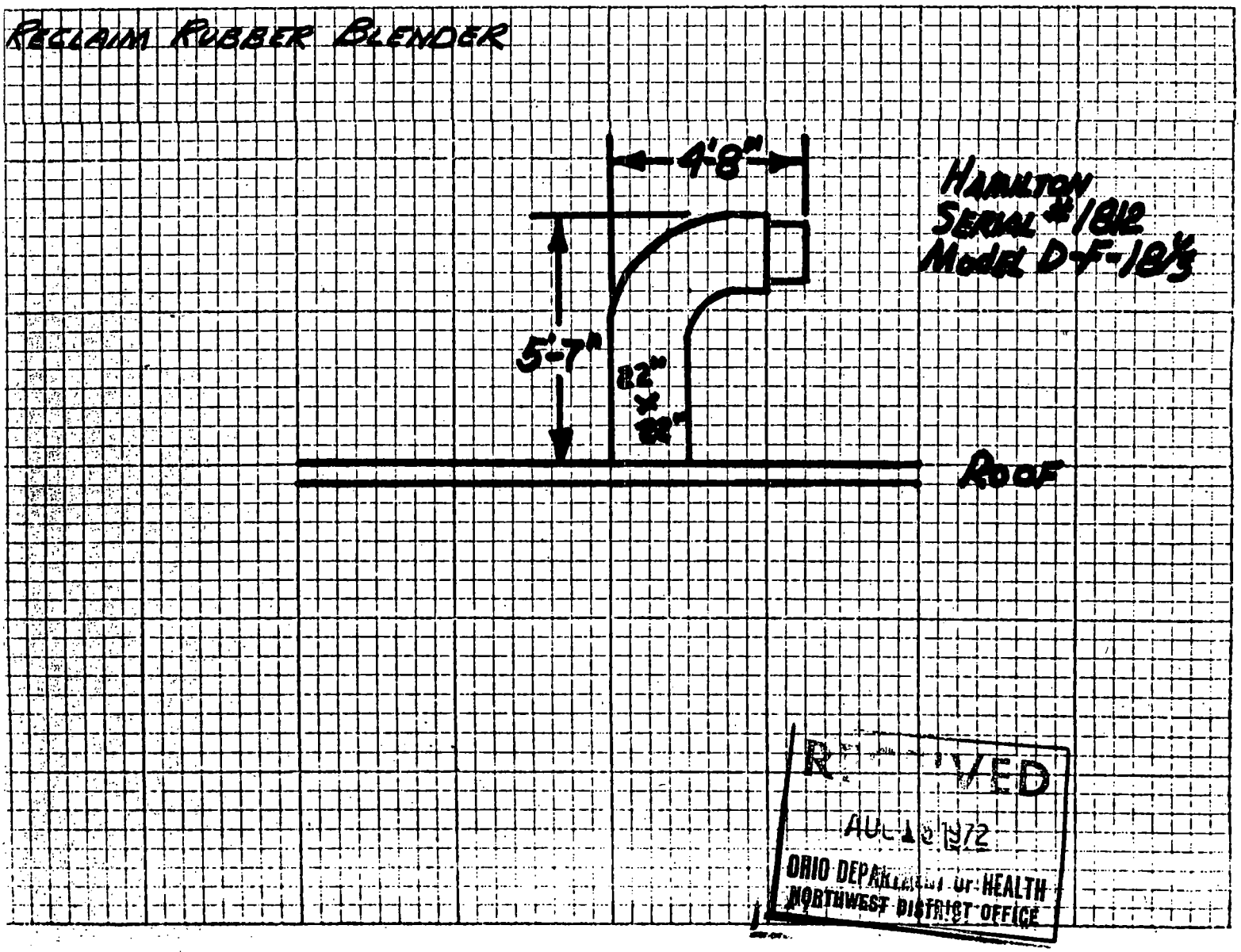
Height: Above roof 5'-7" ft. Above ground 18'-7" ft.

Exit gas: Temp. _____ °F. Volume _____ ACFM Velocity _____ feet per minute

Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

OFFICIAL USE ONLY
Emission No. 03 17 / 01 / 0102
Source No. 5 / 088

DATA SHEET
STACKS AND OTHER EGRESS POINTS

Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

Type: [X] Round [ ] Rectangular - top inside dimension(s) (L & W or Diam.) 16" DIA

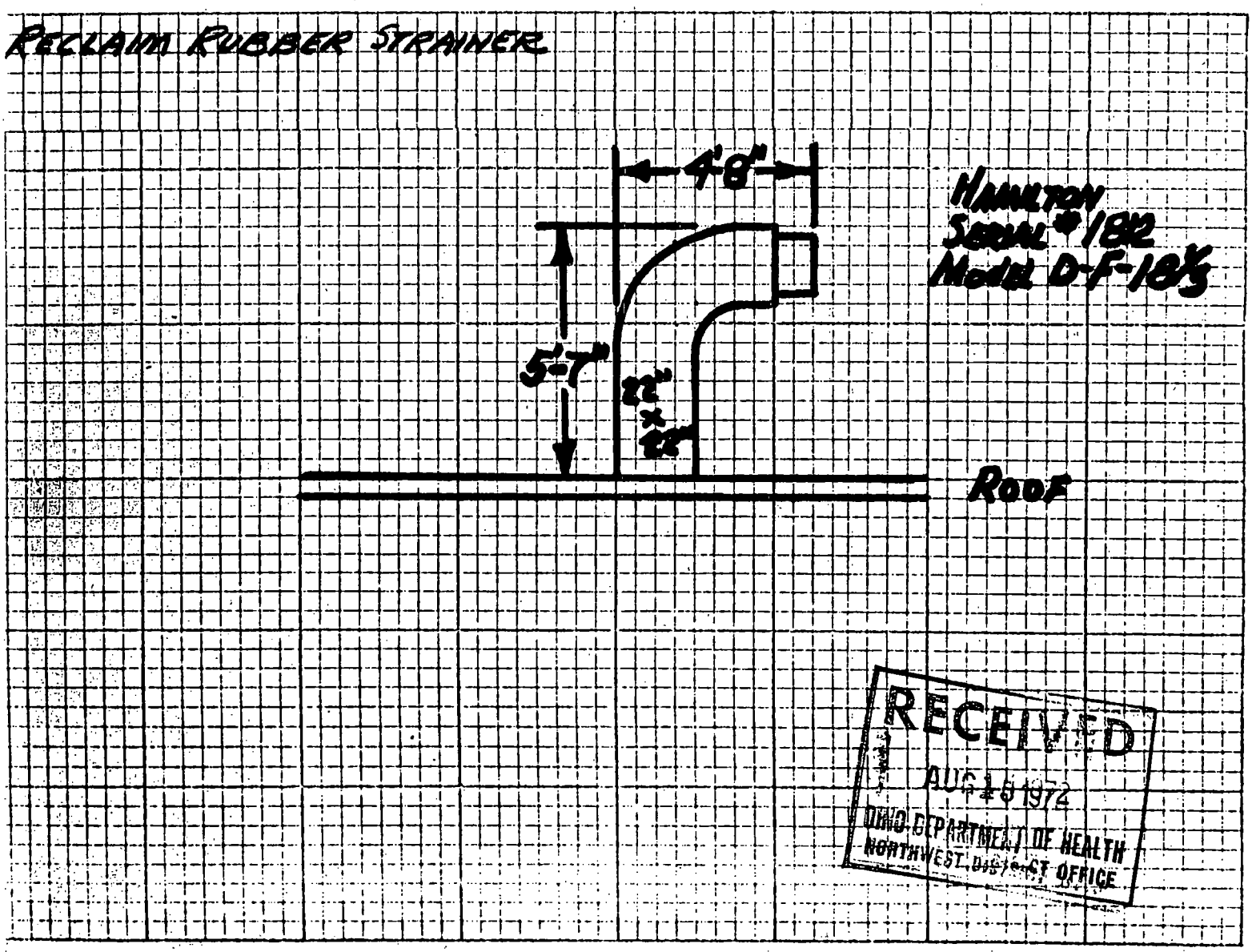
Height: Above roof 5'-7" ft. Above ground 18'-7" ft.

Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____ feet per minute

Continuous monitoring equipment: [ ] Yes [X] No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03/12/01/10102
Source No. P/010

APPLICATION FOR PERMIT TO PROCESS

5/16/74 (A)
MAD #70

1. Facility Name Swan Rubber-Div. of Amerace-Esna Person to Contact Jack McCoy
   Facility Address Beal Avenue Mailing Address Beal Avenue
   Bucyrus (City, Village or Township) Crawford (County) 44820 (Zip) Street
   Bucyrus, (City) Ohio (State) 44820 (Zip) Street
   Telephone 419-562-1011 (Area Code) (Number)
2. This application is submitted for:
   - [X] Permit to operate an existing source
   - [ ] Permit to construct a new source or modify an existing source
   - [ ] Variance from regulation(s) _____ for _____ months
3. Check-list of information to accompany this application:
   - [X] Plans and drawings
   - [ ] Emission tests or calculations
   - [X] Process flow diagram
   - [ ] Compliance time schedule
   - [ ] Construction schedule
   - [ ] Additional information
4. Name of process Reclaim chopper (plastic) Year installed 1952
5. Product of this process Plastic PVC reclaim
6. Process equipment _____ Your identification _____
7. Manufacturer Mitts & Merrill Make or model Type #15 - CSE - LH-HOG
8. Capacities (lbs/hr): Rated _____ Maximum _____

OPERATING INFORMATION

9. Normal operating schedule: hrs/day 24 days/wk 5 wks/yr 48
10. Percent annual production (finished units) by season: Winter _____ Spring _____ Summer _____ Fall _____
11. Hourly production rates (lbs): Average _____ Maximum _____
12. Annual production (indicate units) 9,532,517#
13. Projected percent annual increase in production None
14. Method of exhaust ventilation: [X] Stack [ ] Window fan [ ] Roof vent [ ] Other, describe _____
15. Type of process: [X] Continuous [ ] Batch
16. If batch, minutes per cycle _____ minutes between cycles _____
17. Does process involve any of the following (check all applicable)? [ ] Lead [ ] Asbestos [ ] Beryllium [ ] Mercury
18. Materials used in process (include organic materials)

List of Raw Materials	Principal Use	Amount (lbs./hr.)
Scrap PVC plastic		1654#/hr.

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NORTHWEST DISTRICT OFFICE

19. This application must include a detailed process flow diagram. Show entry and exit points of all raw materials, intermediate products, by-products and finished products. Label all materials including airborne contaminants and other waste materials.

Important Note: If emissions from this source have been determined by source tests, material balances or emission factors, include such data and supporting calculations with application.

RAW MATERIALS

PLASTIC RECLAIM

DESCRIPTION	TOTAL	LB/HR.
Soft PVC Plastisol (boot scrap)	5,906,000 lb.	1025.347 lb/hr
Polyethylene (AC 617)	25,000	4.340
Plasticizer for vinyl reclaim	22,000 gal.	3.819 gal/hr
Plasticizer filter cake	865,000 lb.	50.173 lb/hr
Ground whiting	7,285,000 lb.	1264.756 lb/hr

FOR OFFICIAL USE ONLY
Premise No. 03 17 01 10102
Source No. S1055

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus (City, Village or Township) Crawford (County) 44820 (Zip) | Bucyrus (City) Ohio (State) 44820 (Zip)

Telephone 419-562-1011 (Area Code / Number)

2. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 36" DIA

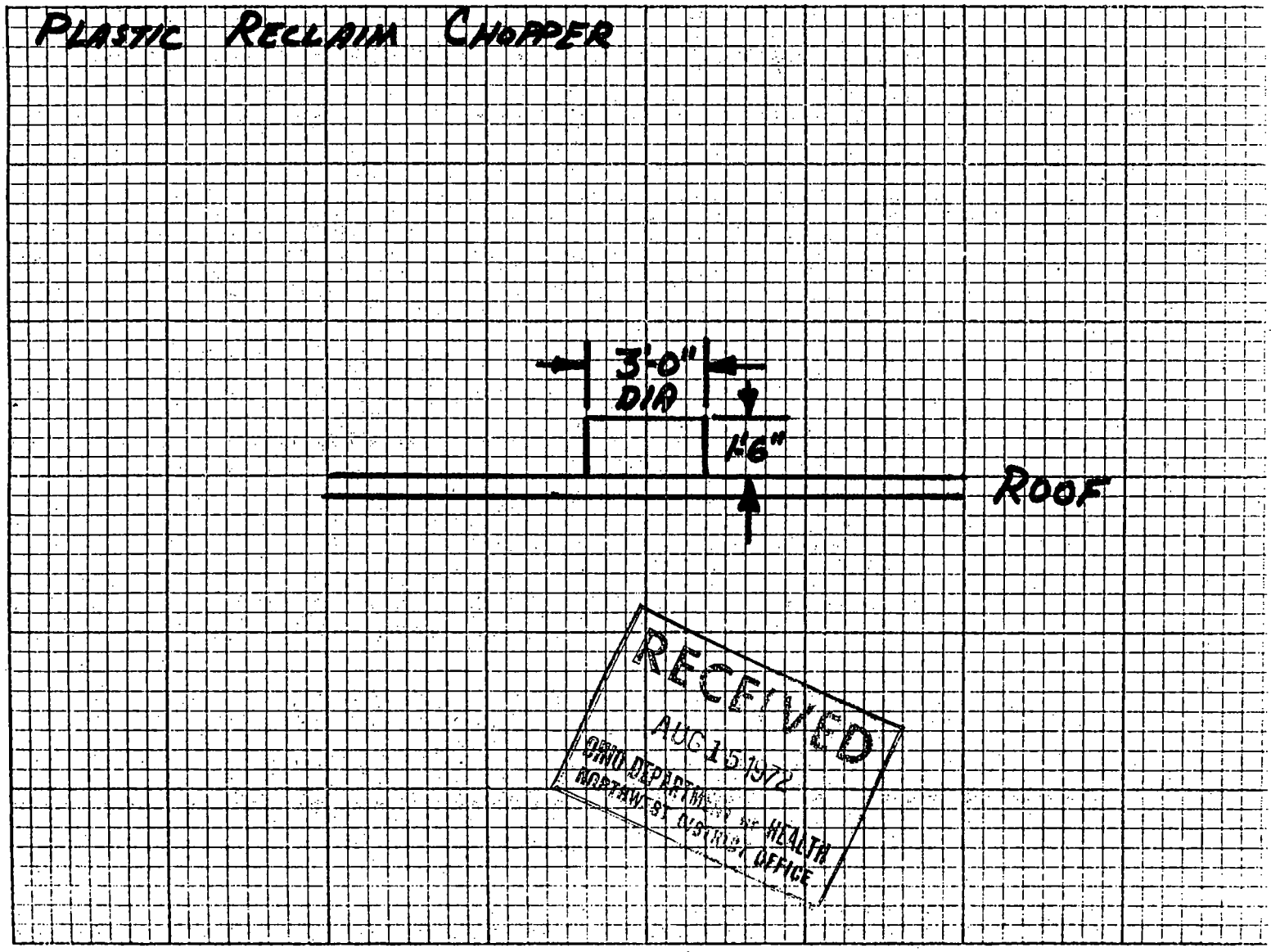
3. Height: Above roof 1'-6" ft. Above ground 28'-1" ft.

4. Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

RAW MATERIALS

PLASTIC RECLAIM

DESCRIPTION	TOTAL	LB/HR.
Soft PVC Plastisol (boot scrap)	5,906,000 lb.	1025.347 lb/hr
Polyethylene (AC 617)	25,000	4.340
Plasticizer for vinyl reclaim	22,000 gal.	3.819 gal/hr
Plasticizer filter cake	865,000 lb.	50.173 lb/hr
Ground whiting	7,285,000 lb.	1264.756 lb/hr

FOR OFFICIAL USE ONLY
Premise No. 03/17/01/10102
Source No. P/010

APPLICATION FOR PERMIT TO INSTALL OR MODIFY AN AIR CONTAMINANT SOURCE

5/16/74 (A)
MAD #70

1. Facility Name Swan Rubber-Div. of Amerace-Esna Person to Contact Jack McCoy
   Facility Address Beal Avenue Mailing Address Beal Avenue
   Bucyrus (City, Village or Township) Crawford (County) 44820 (Zip) Bucyrus, (City) Ohio (State) 4482((Zip)
   Telephone 419-562-1011 (Area Code) (Numb
2. This application is submitted for:
   - [X] Permit to operate an existing source
   - [ ] Permit to construct a new source or modify an existing source
   - [ ] Variance from regulation(s) _____ for _____ months
3. Check-list of information to accompany this application:
   - [X] Plans and drawings
   - [ ] Emission tests or calculations
   - [X] Process flow diagram
   - [ ] Compliance time schedule
   - [ ] Construction schedule
   - [ ] Additional information
4. Name of process Reclaim chopper (plastic) Year installed 1952
5. Product of this process Plastic PVC reclaim
6. Process equipment _____ Your identification _____
7. Manufacturer Mitts & Merrill Make or model Type #15 - CSE - LH-HOG
8. Capacities (lbs/hr): Rated _____ Maximum _____

OPERATING INFORMATION

9. Normal operating schedule: hrs/day 24 days/wk 5 wks/yr 48
10. Percent annual production (finished units) by season: Winter _____ Spring _____ Summer _____ Fall _____
11. Hourly production rates (lbs): Average _____ Maximum _____
12. Annual production (indicate units) 9,532,517#
13. Projected percent annual increase in production None
14. Method of exhaust ventilation: [X] Stack [ ] Window fan [ ] Roof vent [ ] Other, describe _____
15. Type of process: [X] Continuous [ ] Batch
16. If batch, minutes per cycle _____ minutes between cycles _____
17. Does process involve any of the following (check all applicable)? [ ] Lead [ ] Asbestos [ ] Beryllium [ ] Mercur
18. Materials used in process (include organic materials)

List of Raw Materials	Principal Use	Amount (lbs./hr.)
Scrap PVC plastic		1654#/hr.

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NORTHWEST DISTRICT OFFICE

19. This application must include a detailed process flow diagram. Show entry and exit points of all raw materials, intermediate products, by-products and finished products. Label all materials including airborne contaminants and other waste materials.

Important Note: If emissions from this source have been determined by source tests, material balances or emission factors, include such data and supporting calculations with application.

FOR OFFICIAL USE ONLY
Premise No. 03 17 101 10102
Source No. P 1008

APPLICATION FOR PERMIT TO PROCESS

Ⓐ 5/16/74
MAD #70

1. Facility Name Swan Rubber-Div. of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue Mailing Address Beal Avenue

Bucyrus (City, Village or Township) Crawford (County) 44820 (Zip) Bucyrus, (City) Ohio (State) 4482 (Zi)

Telephone 419-562-1011 (Area Code) (Numb)

2. This application is submitted for:
   - [X] Permit to operate an existing source
   - [ ] Permit to construct a new source or modify an existing source
   - [ ] Variance from regulation(s) _____ for _____ months
3. Check-list of information to accompany this application:
   - [X] Plans and drawings
   - [ ] Emission tests or calculations
   - [X] Process flow diagram
   - [ ] Compliance time schedule
   - [ ] Construction schedule
   - [ ] Additional information
4. Name of process Reclaim refiners (Plastic) Year installed 1952-56
5. Product of this process Plastic reclaim PVC
6. Process equipment Rubber mills Your identification _____
7. Manufacturer Farrel Make or model 21 x 24 x 32
8. Capacities (lbs/hr): Rated _____ Maximum _____

OPERATING INFORMATION

9. Normal operating schedule: hrs/day 24 days/wk 5 wks/yr 48
10. Percent annual production (finished units) by season: Winter 25 Spring 25 Summer 25 Fall 25
11. Hourly production rates (lbs): Average _____ Maximum _____
12. Annual production (indicate units) 9,532,000
13. Projected percent annual increase in production _____
14. Method of exhaust ventilation: [X] Stack [ ] Window fan [ ] Roof vent [ ] Other, describe _____
15. Type of process: [X] Continuous [ ] Batch
16. If batch, minutes per cycle _____ minutes between cycles _____
17. Does process involve any of the following (check all applicable)? [ ] Lead [ ] Asbestos [ ] Beryllium [ ] Mercur
18. Materials used in process (include organic materials)

List of Raw Materials	Principal Use	Amount (lbs./hr.)

19. This application must include a detailed process flow diagram. Show entry and exit points of all raw materials, intermediate products, by-products and finished products. Label all materials including airborne contaminants and other waste materials.

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NORTHWEST DISTRICT OFFICE

Important Note: If emissions from this source have been determined by source tests, material balances or emission factors, include such data and submit with application.

P-PS-02

RAW MATERIALS

PLASTIC RECLAIM

DESCRIPTION	TOTAL	LB/HR.
Soft PVC Plastisol (boot scrap)	5,906,000 lb.	1025.347 lb/hr
Polyethylene (AC 617)	25,000	4.340
Plasticizer for vinyl reclaim	22,000 gal.	3.819 gal/hr
Plasticizer filter cake	865,000 lb.	50.173 lb/hr
Ground whiting	7,285,000 lb.	1264.756 lb/hr

FOR OFFICIAL USE ONLY
Premise No. 03 17 01 10102
Source No. S 1060

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus (City, Village or Township) Crawford (County) 44820 (Zip) Bucyrus (City) Ohio (State) 44820 (Zip)

Telephone 419-562-1011 (Area Code / Number)

2. Type: [X] Round [ ] Rectangular - top inside dimension(s) (L & W or Diam.) 24" DIA

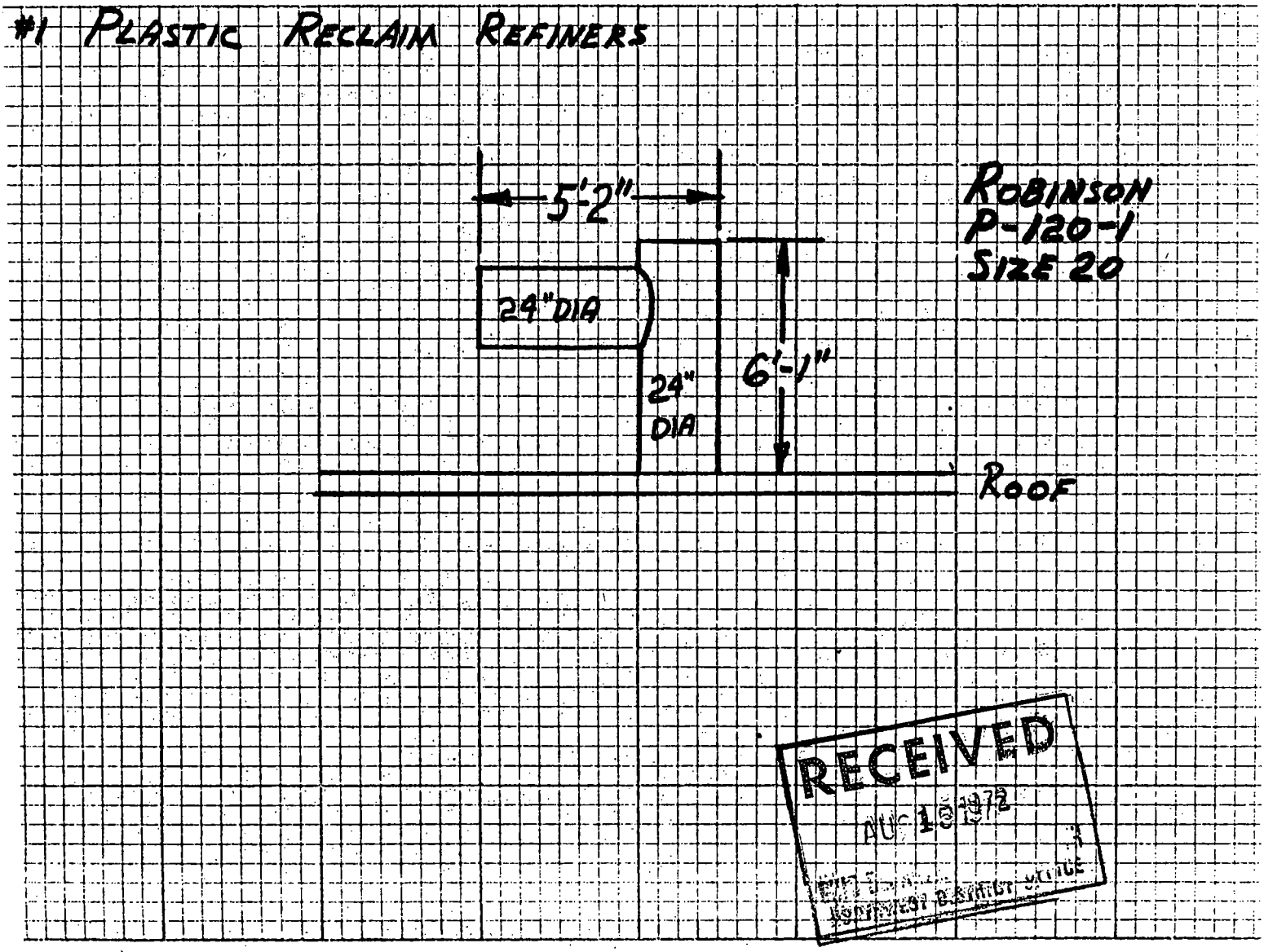
3. Height: Above roof 6'-1" ft. Above ground 21'-6" ft.

4. Exit gas: Temp. ____ °F. Volume ____ ACFM Velocity ____ feet per minute

5. Continuous monitoring equipment: [ ] Yes [X] No. If yes, indicate: Type ____

Manufacturer ____ Make or model ____ Pollutant ____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03/17/01/0102
Source No. S/051

DATA SHEET
STACKS AND OTHER EGRESS POINTS

Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue Mailing Address Beal Avenue

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 24" DIA

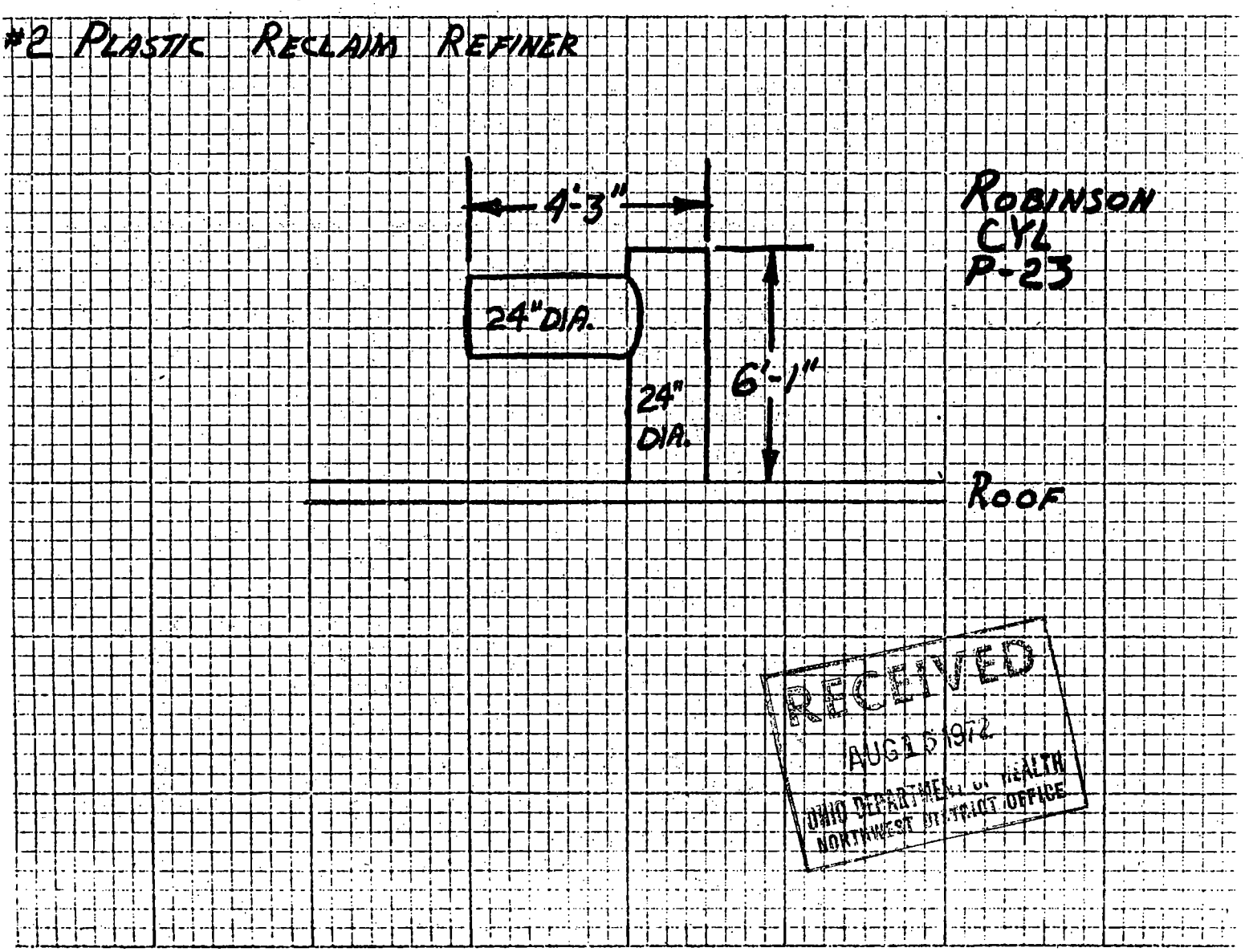
Height: Above roof 6'-1" ft. Above ground 21'-6" ft.

Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____ feet per minute

Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one sour or control device discharges into this stack show all connections.



ortant Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

OR OFFICIAL USE ONLY
remise No. 03177010202
ource No. S1052

DATA SHEET
STACKS AND OTHER EGRESS POINTS

Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address 1111 Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus (City, Village or Township) | Crawford (County) | 44820 (Zip)
Bucyrus (City) | Ohio (State) | 44820 (Zip)

Telephone 419-562-1011 (Area Code / Number)

Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 24" DIA.

Height: Above roof 6'-1" ft. Above ground 21'-6" ft.

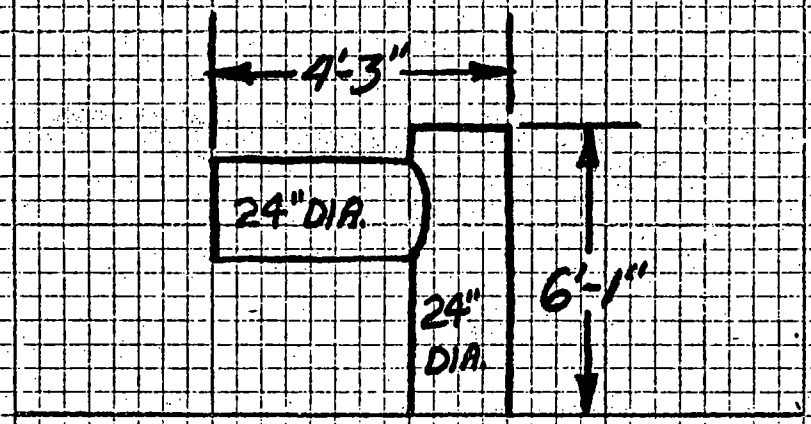
Exit gas: Temp. _____ °F. Volume _____ ACFM Velocity _____ feet per minute

Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one sour or control device discharges into this stack show all connections.

#3 PLASTIC RECLAIM REFINER



portant Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

OR OFFICIAL USE ONLY
Premise No. 03/17/01/10102
Source No. S/053

DATA SHEET
STACKS AND OTHER EGRESS POINTS

Facility Name: Swan Rubber Division of Amerace-Esna — Person to Contact: Jack McCoy

Facility Address: Beal Avenue (Street) — Mailing Address: Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone: 419-562-1011 (Area Code / Number)

Type: [X] Round [ ] Rectangular - top inside dimension(s) (L & W or Diam.) 24" DIA.

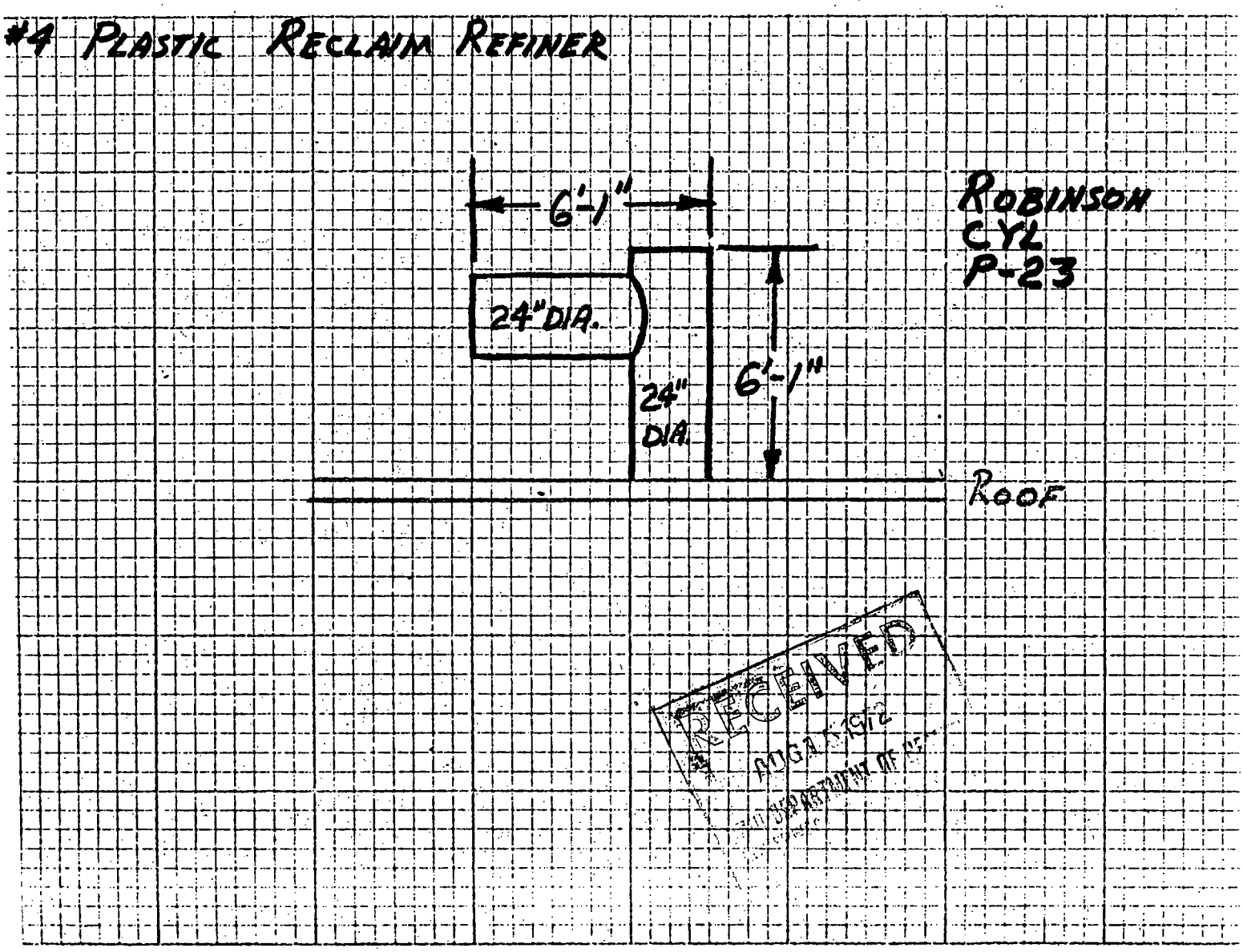
Height: Above roof 6'-1" ft. Above ground 21'-6" ft.

Exit gas: Temp. ____ °F. Volume ____ ACFM Velocity ____ feet per minute

Continuous monitoring equipment: [ ] Yes [X] No. If yes, indicate: Type ____

Manufacturer ____ Make or model ____ Pollutant ____

Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one sour or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03/17/01/10102
Source No. P/007

APPLICATION FOR PERMIT TO PROCESS

(A) MAD #70
5/16/74

1. Facility Name Swan Rubber-Div. of Amerace-Esna — Person to Contact Jack McCoy

Facility Address Beal Avenue — Mailing Address Beal Avenue

Bucyrus	Crawford	44820	Bucyrus,	Ohio	4482
City, Village or Township	County	Zip	City	State	Zi

Telephone 419-562-1011 (Area Code / Numb)

2. This application is submitted for:
   - [X] Permit to operate an existing source
   - [ ] Permit to construct a new source or modify an existing source
   - [ ] Variance from regulation(s) _____ for _____ months
3. Check-list of information to accompany this application:
   - [X] Plans and drawings
   - [ ] Emission tests or calculations
   - [X] Process flow diagram
   - [ ] Compliance time schedule
   - [ ] Construction schedule
   - [ ] Additional information
4. Name of process Plastic ribbon blender — Year installed 1963
5. Product of this process compound stock
6. Process equipment ribbon blender — Your identification #3 blender
7. Manufacturer Day — Make or model _____
8. Capacities (lbs/hr): Rated 2,000 — Maximum _____

OPERATING INFORMATION

9. Normal operating schedule: hrs/day 24 — days/wk 5 — wks/yr 48
10. Percent annual production (finished units) by season: Winter 25 — Spring 25 — Summer 25 — Fall 25
11. Hourly production rates (lbs): Average 1615# — Maximum 2000#
12. Annual production (indicate units) 9,300,000#
13. Projected percent annual increase in production _____
14. Method of exhaust ventilation: [X] Stack [ ] Window fan [ ] Roof vent [ ] Other, describe _____
15. Type of process: [ ] Continuous [X] Batch
16. If batch, minutes per cycle 70 — minutes between cycles _____
17. Does process involve any of the following (check all applicable)? [ ] Lead [ ] Asbestos [ ] Beryllium [ ] Mercur
18. Materials used in process (include organic materials)

List of Raw Materials	Principal Use	Amount (lbs./hr.)

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NORTHWEST DISTRICT OFFICE

9. This application must include a detailed process flow diagram showing entry and exit points of all raw materials, intermediate products, by-products and finished products. Also show all materials including airborne contaminants and other waste materials.

Important Note: If emissions from this source have been determined by source tests, material balances or emission factors, include such data and supporting calculations with application.

FOR OFFICIAL USE ONLY
Premise No. 03 17 101 10102
Source No. S1049

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus (City, Village or Township) Crawford (County) 44820 (Zip) Bucyrus (City) Ohio (State) 448? (Zip)

Telephone 419-562-1011 (Area Code) (Number)

2. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 30" DIA.

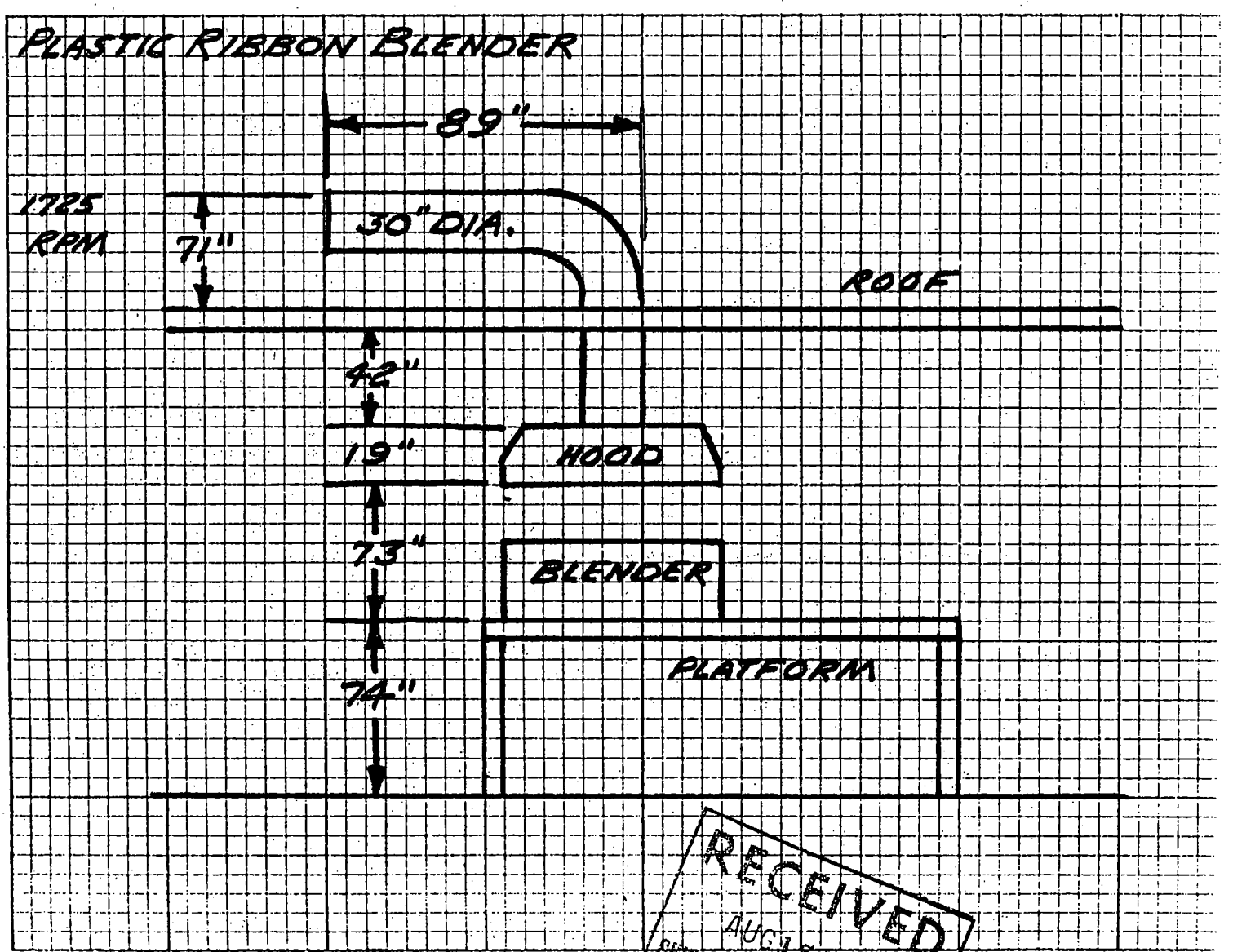
3. Height: Above roof 5'-11" ft. Above ground 21'-11" ft.

4. Exit gas: Temp. _____ °F. Volume _____ ACFM Velocity _____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one so or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means include such data and supporting calculations with this data sheet.

RAW MATERIALS

PLASTIC

DESCRIPTION	TOTAL	LB/HR
Liquid nitrile (hycar 1312)	100,000 lb.	17.361 lb/hr
General purpose PVC (SG 414-2,1225,110,103 EPF77)	5,000,000	868.055
PVC fast drying (310)	35,500	6.163
PVC off grade Type 1	1,500,000	173.611
PVC off grade Type 2	2,150,000	373.263
Zinc oxide	595,000	103.298
Stabilizer (scotch laddie #15,4TS,etc)	75,750	13.151
Stabilizer (Feiro SR-2)	16,000	2.777
Stabilizer Liquid BaCdZn (5969,RRE)	72,000	12.500
Stabilizer Non-toxic, pwd (Vanctoy FA)	4,300	.746
Stabilizer Zinc, liquid (701)	2,400	.416
Stabilizer BaCd, pwd (5912)	19,000	3.298
Stabilizer Non-toxic, liquid (SR-3, NP 110)	200	.034
D O P	127,000	22.048
Reinforcing resin dark (Paradene Z, Extra dark)	110,000	19.097
Flame retardant solid (Chlorowax 70)	9,000	1.562
Sodium bicarbonate	52,000	9.027
Phthalate plasticizer (426,PX 138,etc)	640,000 gal	111.111 gal/hr
Epoxy plasticizer (660,PX800,PM3525)	200,000 lb	34.722 lb.
Lt. Naph pet plasticizer (tufflo G014)	30,000 gal	5.208 gal/hr
Expoxidized soybean oil (estanox 203)	2,000 lb	.347 lb/hr
Plasticizer low extract	23,000	3.993
Double pressed stearic acid (hystrene 97)	24,000	4.166
Calcium stearate (sgnpron special, stayrite #16 flexichem CS)	12,000	2.083
Acrylic modified KIZON	2,000	.347
MT (Thermax)	5,000,000	868.055
Soft clay	3,000,000	520.833

PLASTIC

DESCRIPTION	TOTAL	LB/HR
Ahyd. polysilicate of alumina	121,000 lb.	21.006 lb/hr
Water ground cale cart (atomite)	892,000	154.861
Ground whiting	7,285,000	1,264.756
Pyrazalone red-yellow shade #1151	200	.034
Molybdate red (pimento 12529)	6,000	1.041
Red ZB toner - blue shade (CP 1582)	500	.086
Phthalocyanine blue	600	.104
Phtyaloeyanine green	6,200	1.076
Green yellow shade (3826)	3,400	.590
Yellow greenish shade	23,000	3.993
Chrome yellow, red shade	19,000	3.298
Hansa yellow	1,000	.173
Inorganic yellow pigment	250	.043
Yellow, strontium chromate	700	.121
Benzidene yellow, red shade	25	.004
Titanium dioxide anatose	10,500	1.822
Molybdate orange	2,200	.381
Tinting violet	250	.043
Special black color	4,200	.729
Aluminum	600	.104
Gold pearlescent	1,520	.263
Fluorescent red	300	.052
Fluorescent yellow	300	.052

FOR OFFICIAL USE ONLY
Premise No. 03/77/01 10102
Source No. P/006

APPLICATION FOR PERMIT PROCESS

(A) MAD #70
5/16/74

1. Facility Name Swan Rubber-Div. of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue Mailing Address Beal Avenue

Bucyrus	Crawford	44820	Bucyrus,	Ohio	4482
City, Village or Township	County	Zip	City	State	Zi

Telephone 419-562-1011
Area Code Numb

2. This application is submitted for:
   - [X] Permit to operate an existing source
   - [ ] Permit to construct a new source or modify an existing source
   - [ ] Variance from regulation(s) _____ for _____ months
3. Check-list of information to accompany this application:
   - [X] Plans and drawings
   - [ ] Emission tests or calculations
   - [X] Process flow diagram
   - [ ] Compliance time schedule
   - [ ] Construction schedule
   - [ ] Additional information
4. Name of process Plastic tuber mill lines Year installed 1955
5. Product of this process Compound stocks
6. Process equipment Rubber mix mills & short barrel rubber extruders Your facility identification None
7. Manufacturer NRM & Stewart Bolling Make or model 84"-48"-60" & 4½" rubber extrude Mills
8. Capacities (lbs/hr): Rated _____ Maximum _____
   Each mill - 500#/hr.
   Each tuber-- 1600#/hr.

OPERATING INFORMATION

9. Normal operating schedule: hrs/day 24 days/wk 5 wks/yr 48
10. Percent annual production (finished units) by season: Winter 25 Spring 25 Summer 25 Fall 25
11. Hourly production rates (lbs): Average 4800#/hr. Maximum 7600#/hr
12. Annual production (indicate units) 27,648,000#
13. Projected percent annual increase in production None
14. Method of exhaust ventilation: [X] Stack [ ] Window fan [ ] Roof vent [ ] Other, describe _____
15. Type of process: [X] Continuous [ ] Batch
16. If batch, minutes per cycle _____ minutes between cycles _____
17. Does process involve any of the following (check all applicable)? [ ] Lead [ ] Asbestos [ ] Beryllium [ ] Mercur
18. Materials used in process (include organic materials)

List of Raw Materials	Principal Use	Amount (lbs./hr.)

19. This application must include a detailed process flow diagram. Show entry and exit points of all raw materials, intermediate products, by-products and finished products. Label all ma[illegible]ding airborne contaminants and other waste materials.

Important Note: If emissions from this source have been determined by source tests, material balances or emission factors, include such data and supporting calculations with application.

FOR OFFICIAL USE ONLY
Premise No. 03 17 101 10102
Source No. S 043

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

2. Type: ☐ Round ☒ Rectangular - top inside dimension(s) (L & W or Diam.) 52" x 52"

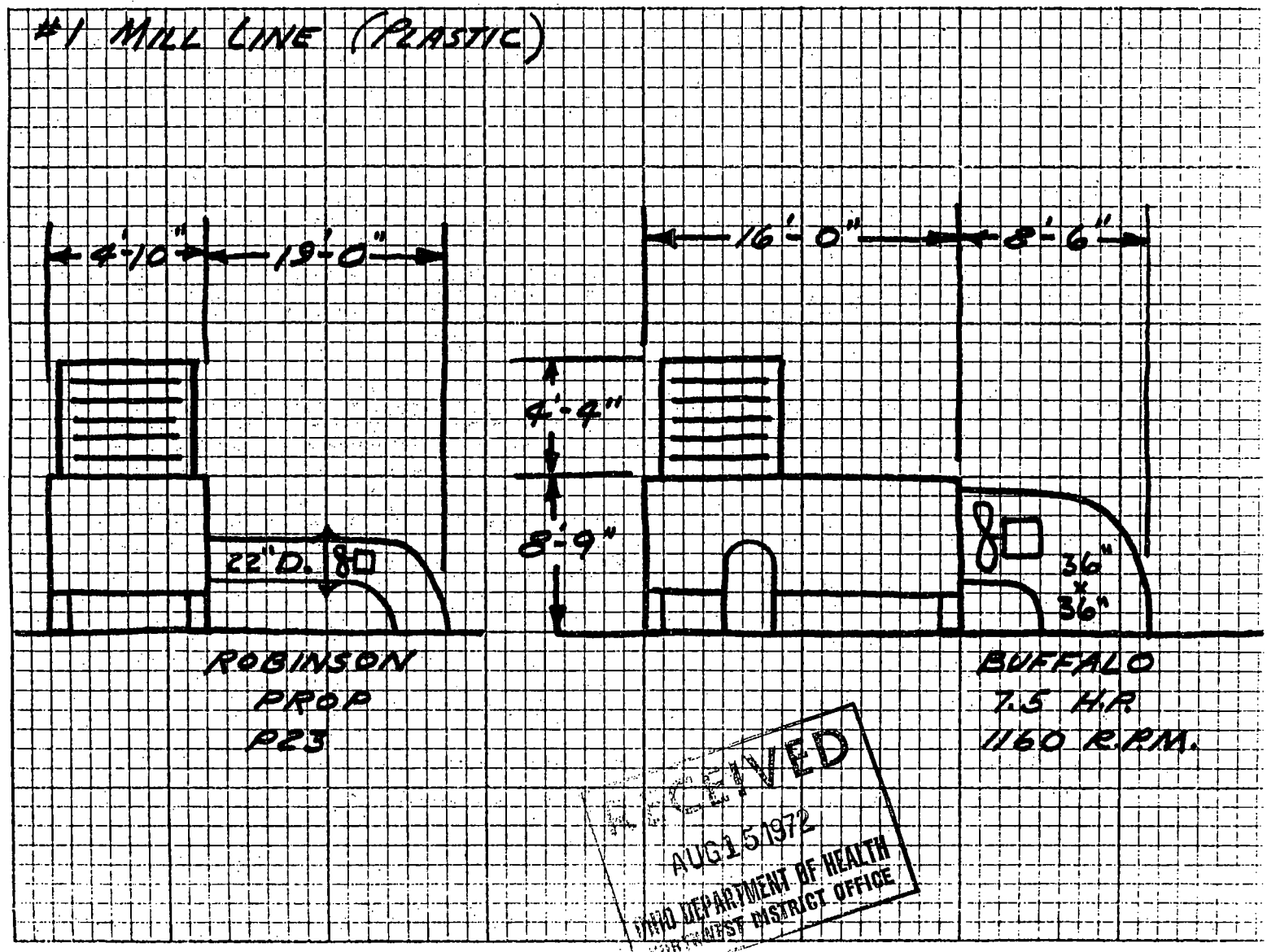
3. Height: Above roof 8'-9" ft. Above ground 25-9" ft.

4. Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

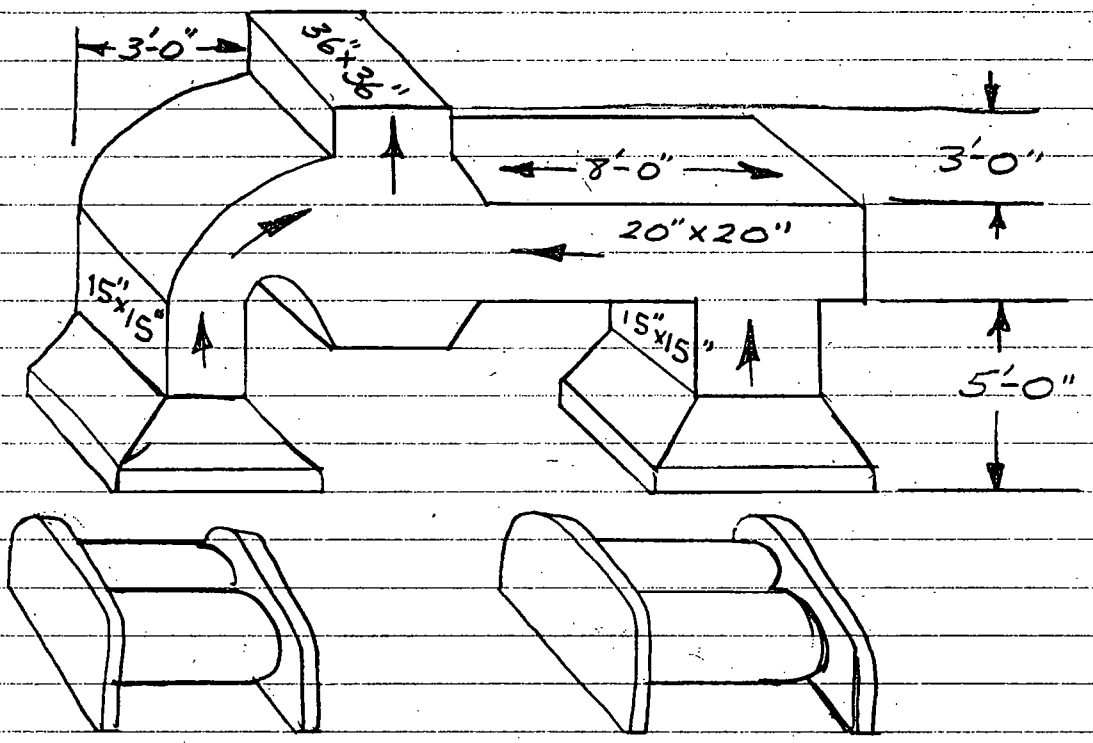
Manufacturer _____ Make or model _____ Pollutant _____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



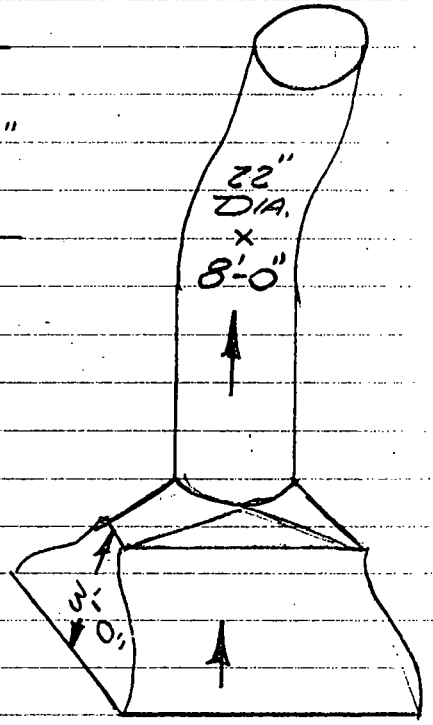
Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

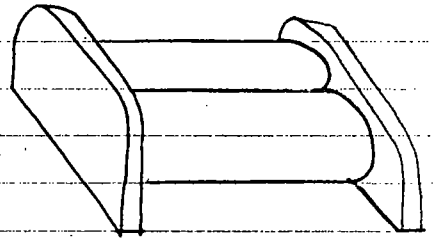
#1 Plastic Tuber Mills



Warm-up Mill

Warm-up Mill





Strip Feed Mill

FOR OFFICIAL USE ONLY
Premise No. 03/17/01/10102
Source No. S1044

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

2. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 12" DIA.

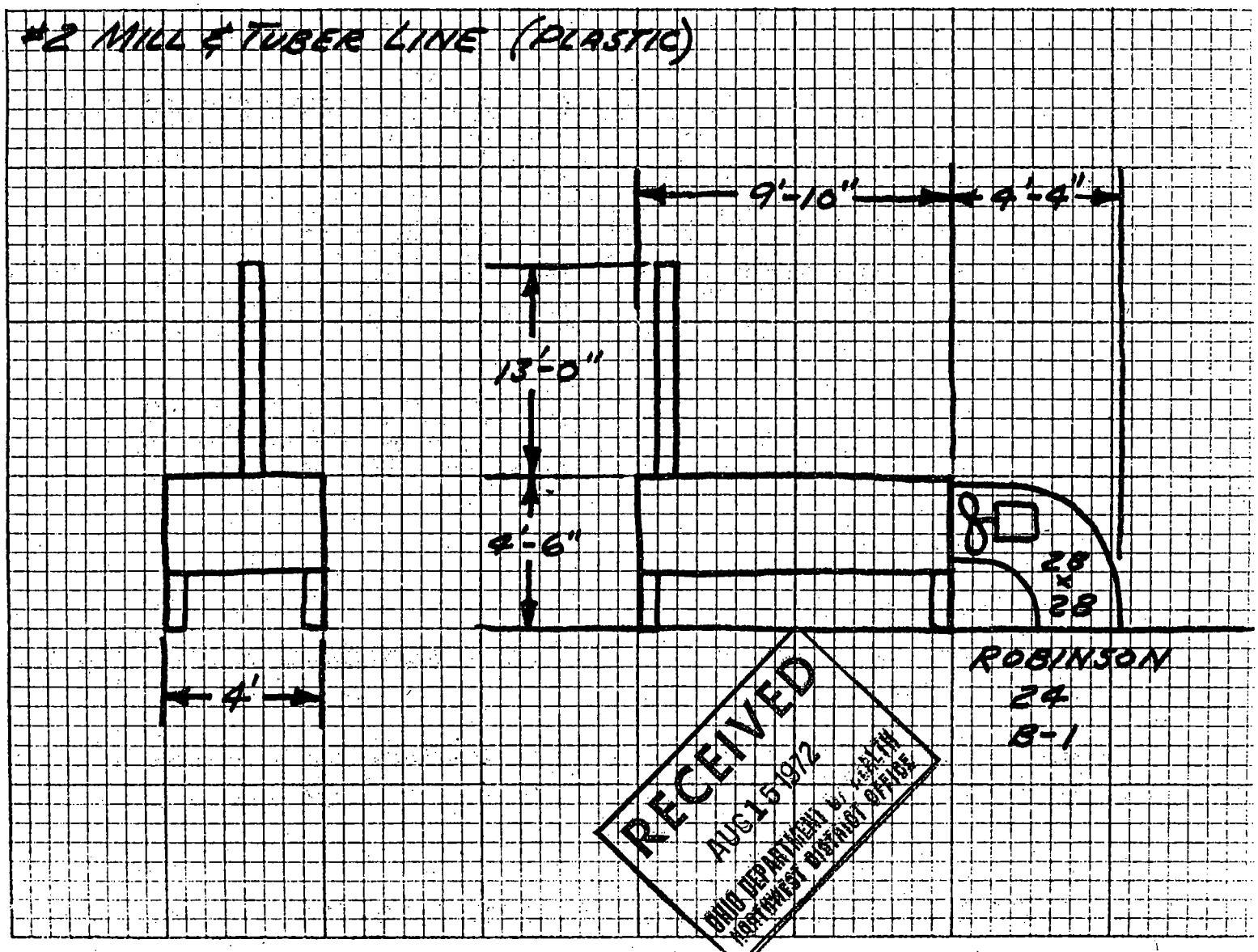
3. Height: Above roof 17'-6" ft. Above ground 34'-6" ft.

4. Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03/12/01/10102
Source No. S/045

DATA SHEET
STACKS AND OTHER EGRESS POINTS

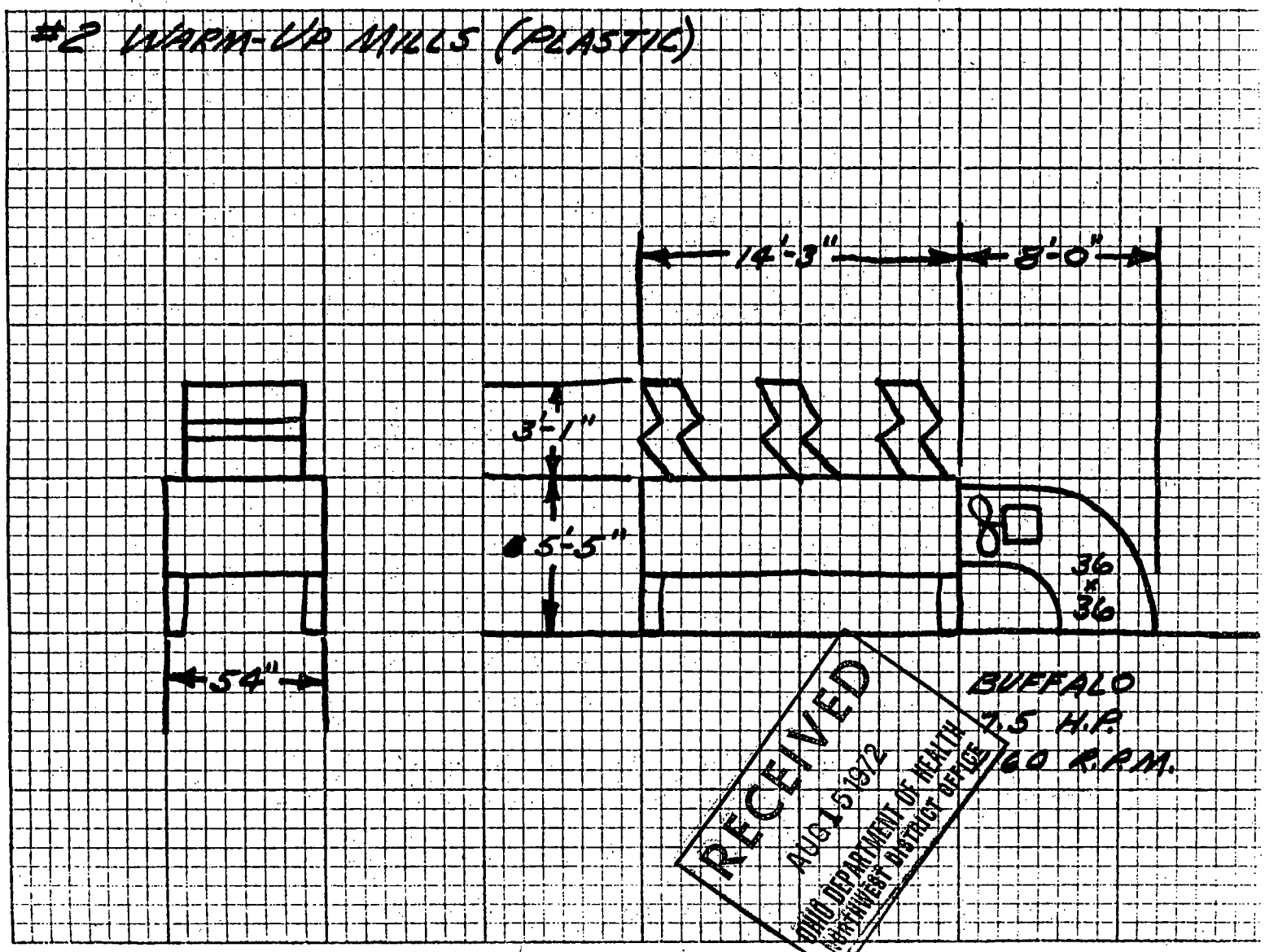
1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

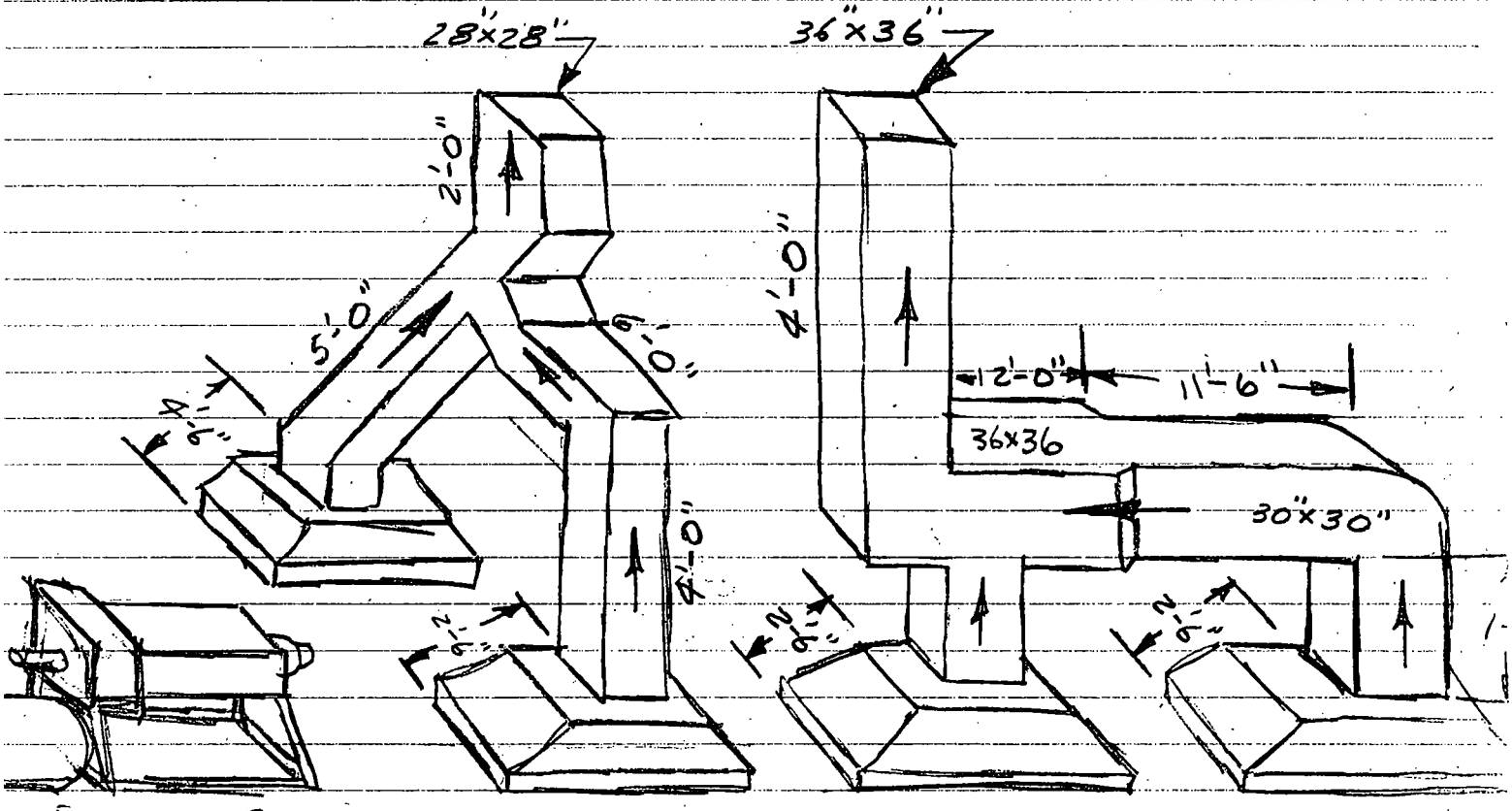
Telephone 419-562-1011 (Area Code / Number)

2. Type: ☐ Round ☒ Rectangular - top inside dimension(s) (L & W or Diam.) 3 (12" x 48")
3. Height: Above roof 8'-6" ft. Above ground 25'-6" ft.
4. Exit gas: Temp. _____ °F. Volume _____ ACFM Velocity _____ feet per minute
5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____
   Manufacturer _____ Make or model _____ Pollutant _____
6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.

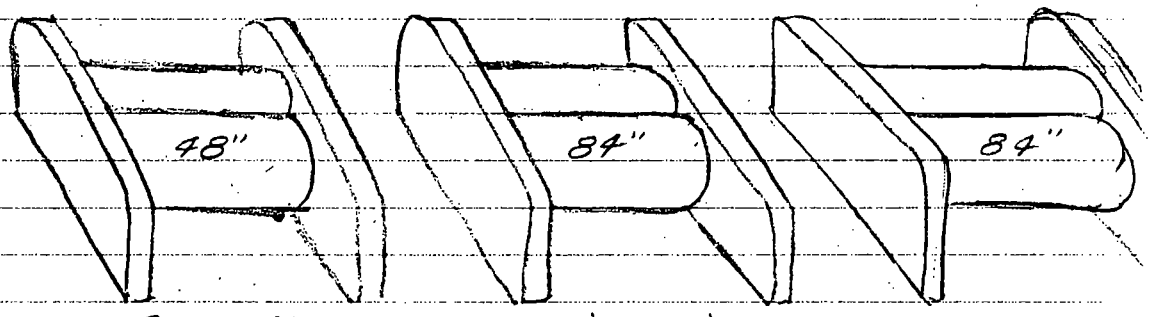


Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

N°2 Plastic Tuber Mills



Extruder (Tuber)



Strip Feed Mill

Warm-Up Mill

Warm-Up Mill

FOR OFFICIAL USE ONLY
Premise No. 03/17/01/10108
Source No. S/046

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

2. Type: ☐ Round ☒ Rectangular - top inside dimension(s) (L & W or Diam.) 3 (12"x48")

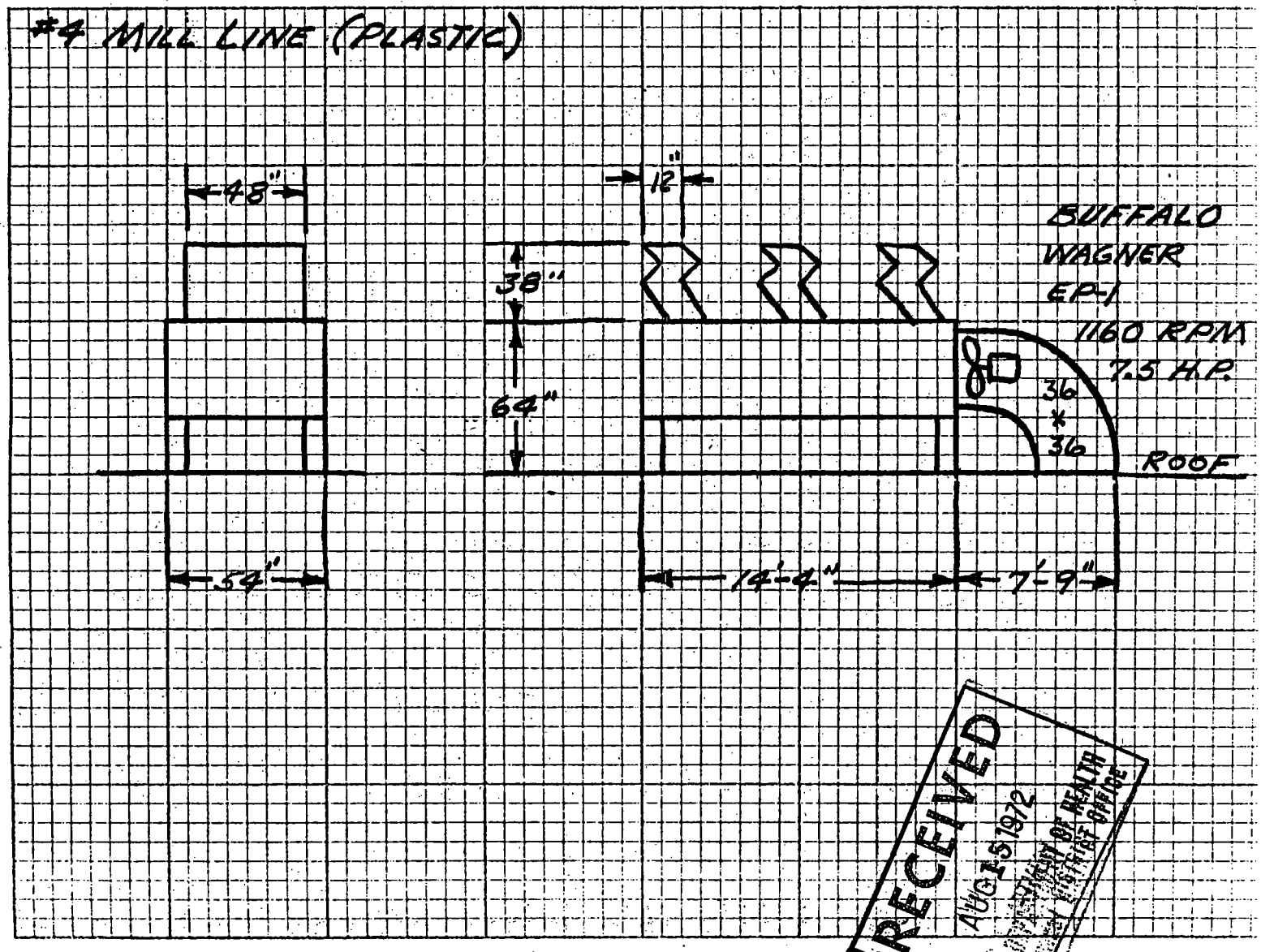
3. Height: Above roof 8'-6" ft. Above ground 25'-6" ft.

4. Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03/17/01/0102
Source No. S/047

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

2. Type: ☐ Round ☒ Rectangular - top inside dimension(s) (L & W or Diam.) 3(12"x40")

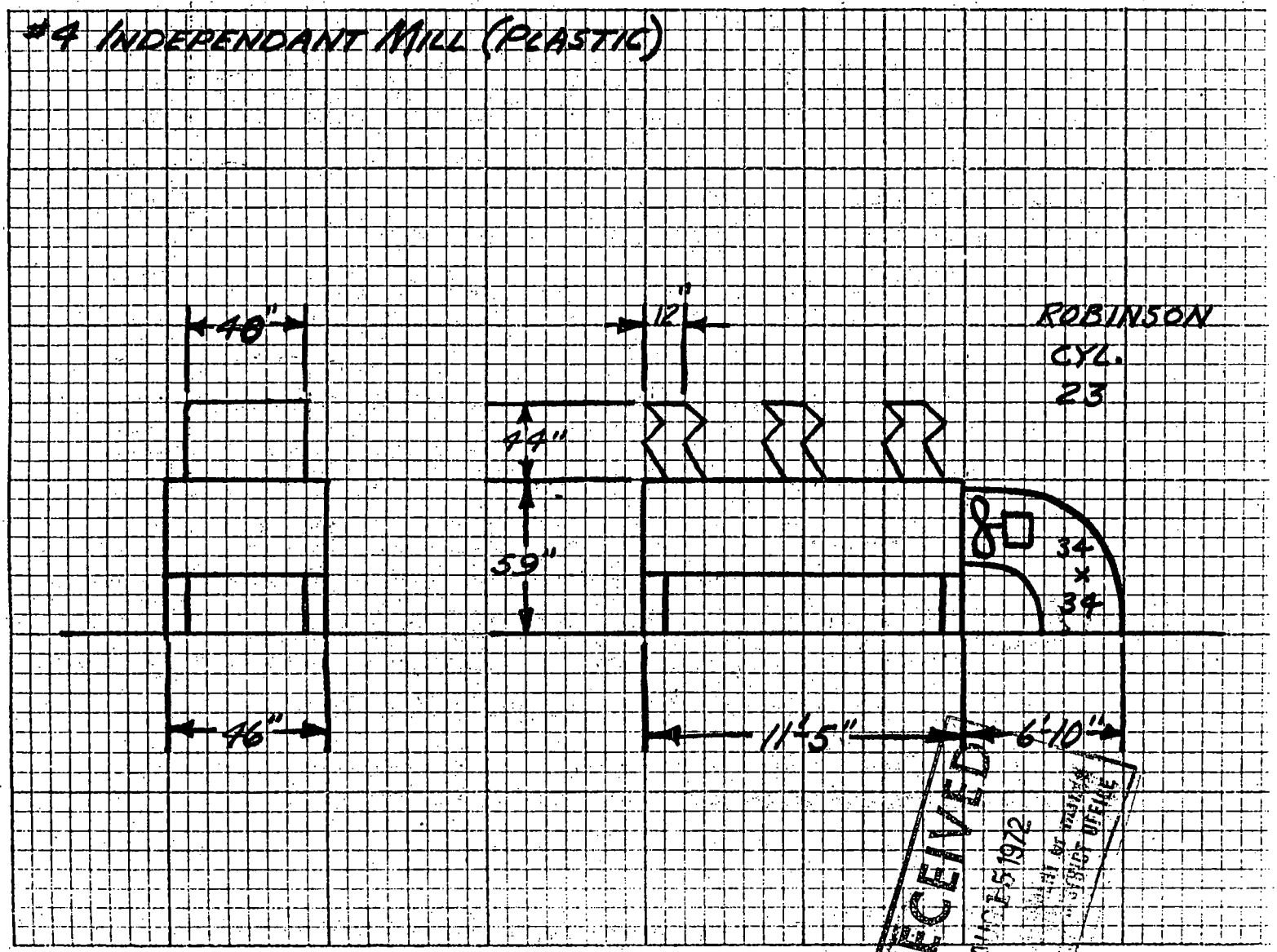
3. Height: Above roof 8'-7" ft. Above ground 25'-7" ft.

4. Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

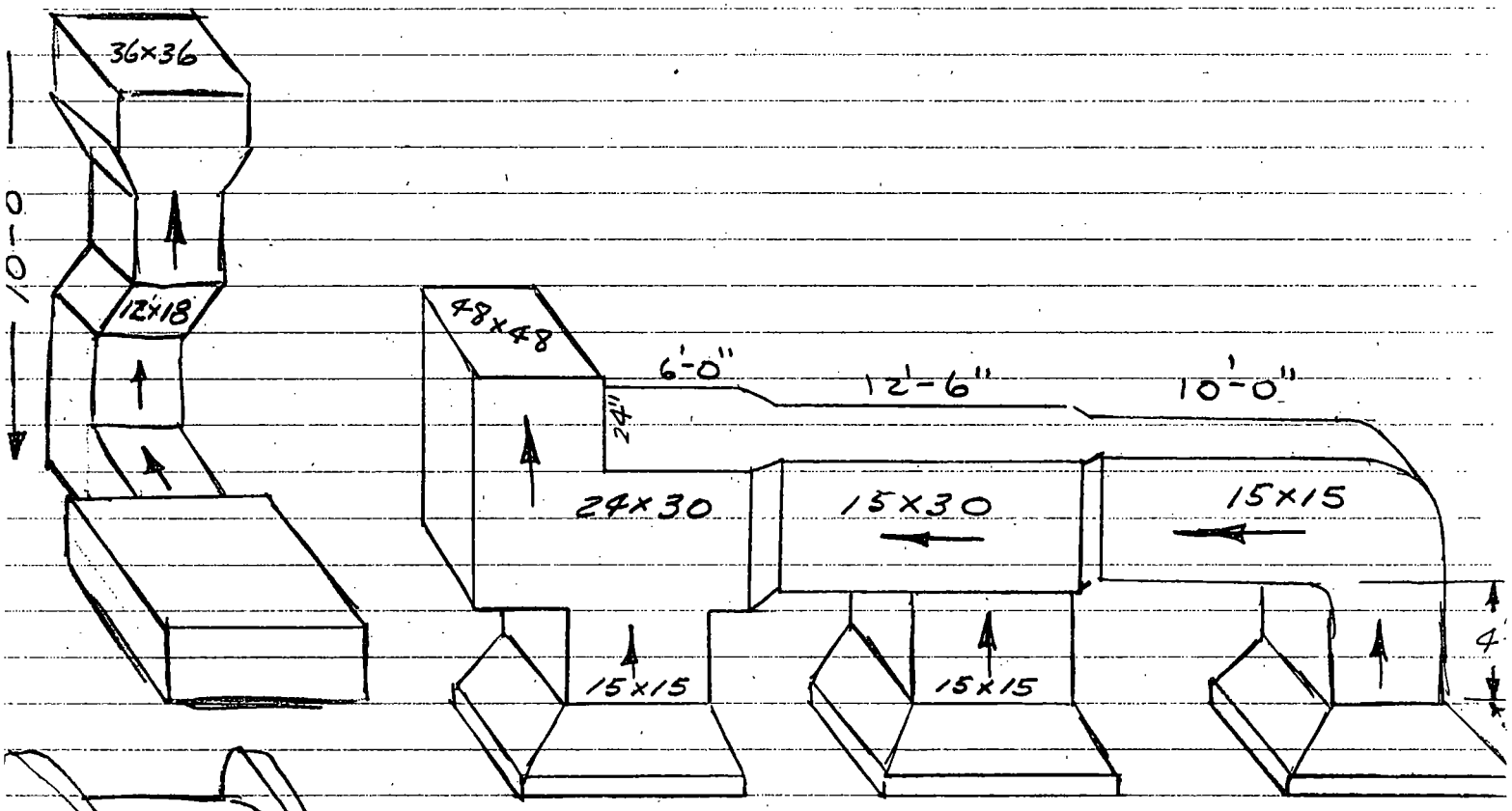
Manufacturer _____ Make or model _____ Pollutant _____

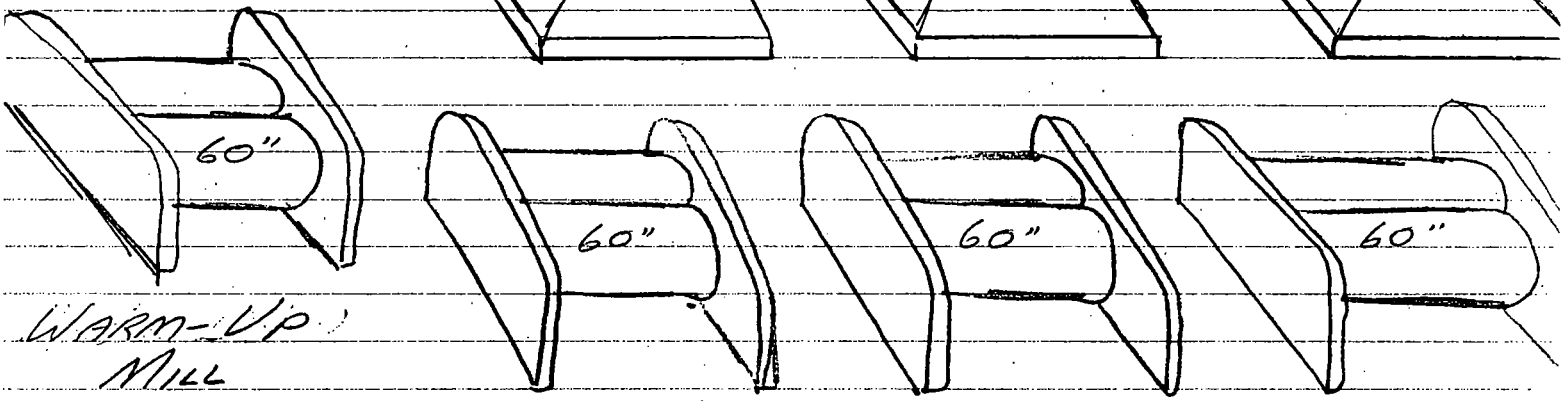
6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

N° 4 Plastic Tuber Mills





WARM-UP MILL

WARM-UP MILL

WARM-UP MILL

STRIP FEE MILL

FOR OFFICIAL USE ONLY
Premise No. 03117101 10102
Source No. S1048

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

2. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 24" DIA

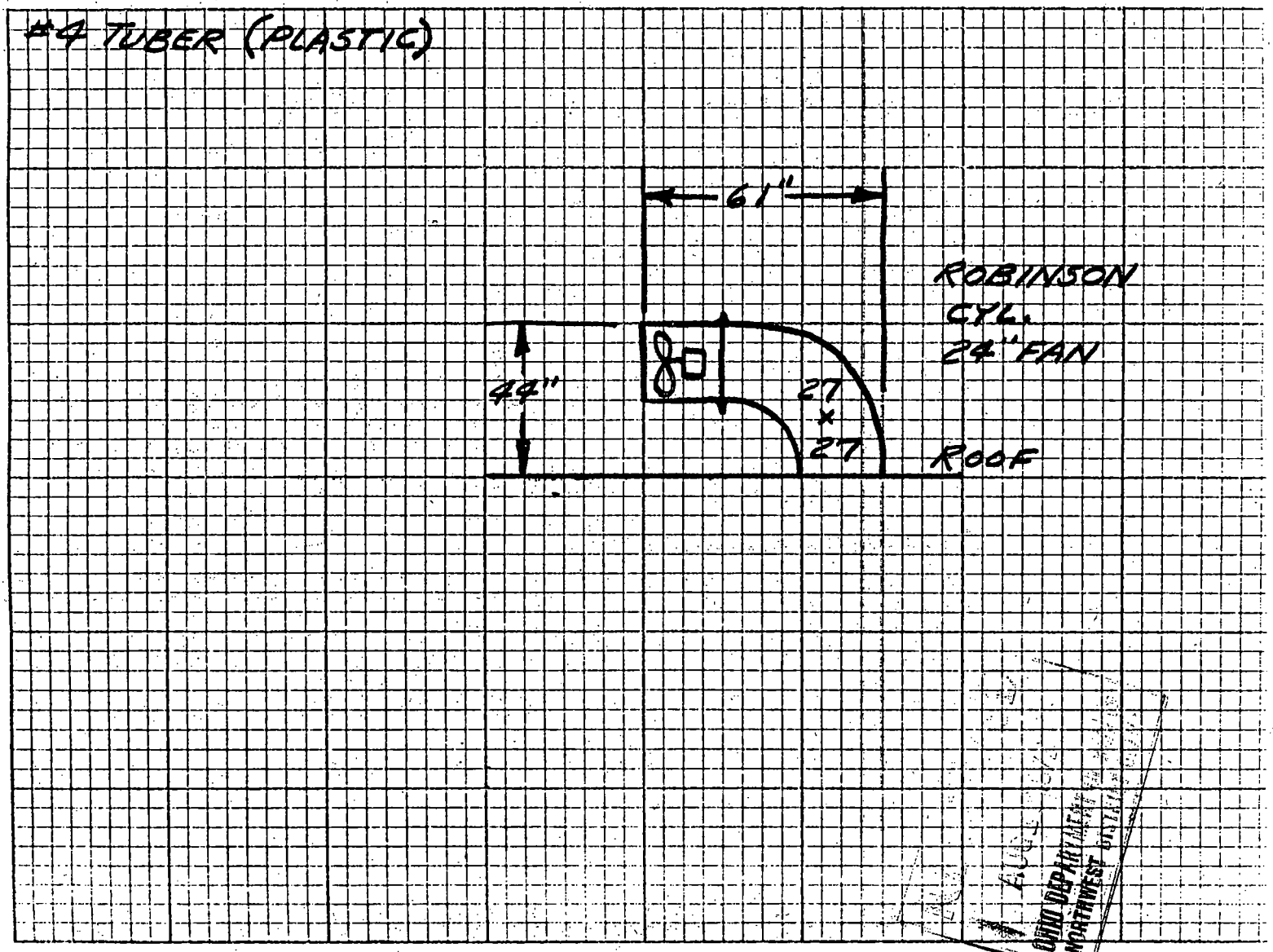
3. Height: Above roof 3'-8" ft. Above ground 20'-8" ft.

4. Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

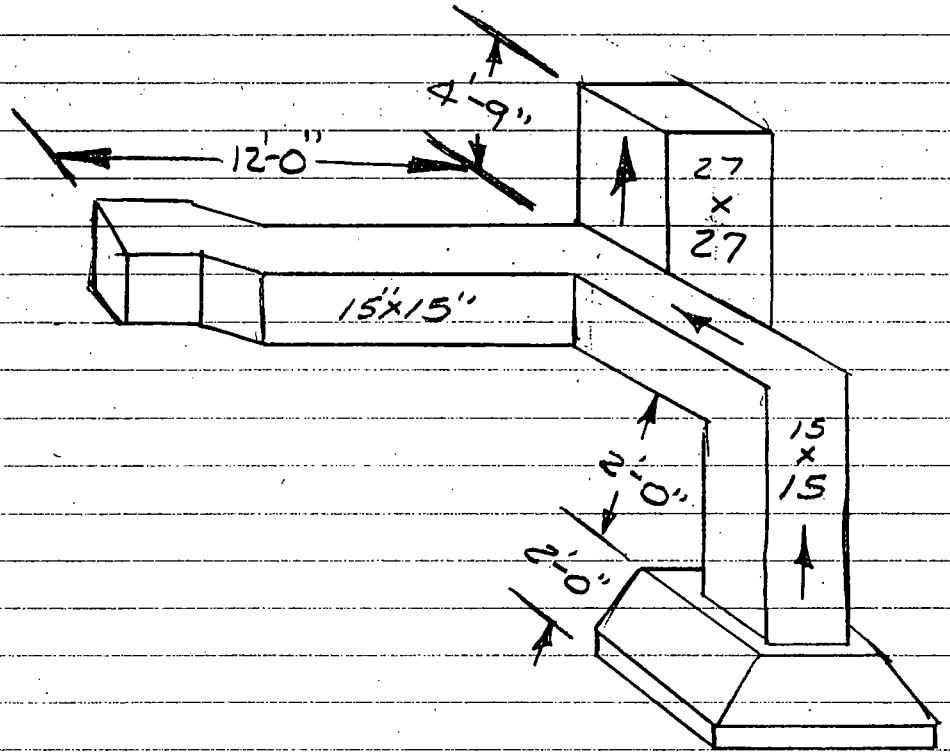
Manufacturer _____ Make or model _____ Pollutant _____

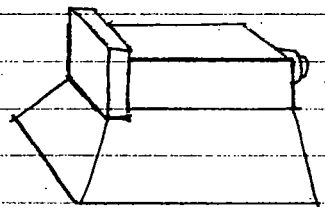
6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

#4 TUBER





RAW MATERIALS

PLASTIC

DESCRIPTION	TOTAL	LB/HR
Liquid nitrile (hycar 1312)	100,000 lb.	17.361 lb/hr
General purpose PVC (SG 414-2,1225,110,103 EPF77)	5,000,000	868.055
PVC fast drying (310)	35,500	6.163
PVC off grade Type 1	1,500,000	173.611
PVC off grade Type 2	2,150,000	373.263
Zinc oxide	595,000	103.298
Stabilizer (scotch laddie #15,4TS,etc)	75,750	13.151
Stabilizer (Feiro SR-2)	16,000	2.777
Stabilizer Liquid BaCdZn (5969,RRE)	72,000	12.500
Stabilizer Non-toxic, pwd (Vanctoy FA)	4,300	.746
Stabilizer Zinc, liquid (701)	2,400	.416
Stabilizer BaCd, pwd (5912)	19,000	3.298
Stabilizer Non-toxic, liquid (SR-3, NP 110)	200	.034
D O P	127,000	22.048
Reinforcing resin dark (Paradene Z, Extra dark)	110,000	19.097
Flame retardant solid (Chlorowax 70)	9,000	1.562
Sodium bicarbonate	52,000	9.027
Phthalate plasticizer (426,PX 138,etc)	640,000 gal	111.111 gal/hr
Epoxy plasticizer (660,PX800,PM3525)	200,000 lb	34.722 lb.
Lt. Naph pet plasticizer (tufflo G014)	30,000 gal	5.208 gal/hr
Expoxidized soybean oil (estanox 203)	2,000 lb	.347 lb/hr
Plasticizer low extract	23,000	3.993
Double pressed stearic acid (hystrene 97)	24,000	4.166
Calcium stearate (sgnpron special, stayrite #16 flexichem CS)	12,000	2.083
Acrylic modified KIZON	2,000	.347
MT (Thermax)	5,000,000	868.055
Soft clay	3,000,000	520.833

PLASTIC

DESCRIPTION	TOTAL	LB/HR
Ahyd. polysilicate of alumina	121,000 lb.	21.006 lb/hr
Water ground cale cart (atomite)	892,000	154.861
Ground whiting	7,285,000	1,264.756
Pyrazalone red-yellow shade #1151	200	.034
Molybdate red (pimento 12529)	6,000	1.041
Red ZB toner - blue shade (CP 1582)	500	.086
Phthalocyanine blue	600	.104
Phtyaloeyanine green	6,200	1.076
Green yellow shade (3826)	3,400	.590
Yellow greenish shade	23,000	3.993
Chrome yellow, red shade	19,000	3.298
Hansa yellow	1,000	.173
Inorganic yellow pigment	250	.043
Yellow, strontium chromate	700	.121
Benzidene yellow, red shade	25	.004
Titanium dioxide anatose	10,500	1.822
Molybdate orange	2,200	.381
Tinting violet	250	.043
Special black color	4,200	.729
Aluminum	600	.104
Gold pearlescent	1,520	.263
Fluorescent red	300	.052
Fluorescent yellow	300	.052

NO LONGER IN USE

FOR OFFICIAL USE ONLY
Premise No. 03 17 01 10102
Source No. P 1005

APPLICATION FOR PERMIT TO PROCESS

DELETE

1. Facility Name Swan Rubber-Div. of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue Mailing Address Beal Avenue

Bucyrus	Crawford	44820	Bucyrus,	Ohio	4482
City, Village or Township	County	Zip	City	State	Zi

Telephone 419-562-1011 (Area Code / Numb)

2. This application is submitted for:
   - ☐ Permit to operate an existing source
   - ☐ Permit to construct a new source or modify an existing source
   - ☒ Variance from regulation(s) _____ for _____ months
3. Check-list of information to accompany this application:
   - ☐ Plans and drawings
   - ☐ Emission tests or calculations
   - ☒ Process flow diagram
   - ☐ Compliance time schedule
   - ☐ Construction schedule
   - ☐ Additional information
4. Name of process Devulcanizer units (reclaim) Year installed 1945,54 64
5. Product of this process Rubber reclaim
6. Process equipment Auto claves Your identification _____
7. Manufacturer 2-Adamson, 1-Biggs Make or models 2 (5' x 55'), 1 (5' x 55')
8. Capacities (lbs/hr): Rated _____ Maximum _____

OPERATING INFORMATION

9. Normal operating schedule: hrs/day 24 days/wk 5 wks/yr 48
10. Percent annual production (finished units) by season: Winter 25 Spring 25 Summer 25 Fall 25
11. Hourly production rates (lbs): Average _____ Maximum _____
12. Annual production (indicate units) 19,309,000#
13. Projected percent annual increase in production _____
14. Method of exhaust ventilation: ☒ Stack ☐ Window fan ☐ Roof vent ☐ Other, describe _____
15. Type of process: ☒ Continuous ☐ Batch
16. If batch, minutes per cycle _____ minutes between cycles _____
17. Does process involve any of the following (check all applicable)? ☐ Lead ☐ Asbestos ☐ Beryllium ☐ Mercur
18. Materials used in process (include organic materials)

List of Raw Materials	Principal Use	Amount (lbs./hr.)

9. This application must include a detailed process flow diagram. Show entry and exit points of all raw materials, intermediate products, by-products and finished products. Label all materials including airborne contaminants and other waste materials.

RECEIVED
AUG 15 1972
DEPARTMENT OF HEALTH
NORTHWEST DISTRICT OFFICE

Important Note: If emissions from this source have been determined by source tests, material balance or emission factors, include such data and supporting calculations with application.

AP-PS-02

RAW MATERIALS

RUBBER RECLAIM

DESCRIPTION	TOTAL	LB/HR
Tires with beads	12,750,000 lb.	2,213.541 #/hr.
Debeaded tires	200,000	34.722
Cab tire scrap	40,000	6.944
MR	2,000,000	347.222
Dark aromatic pet plasticizer	(L x 777) 204,000 gal.	35.416 gal/hr.
Reclaiming agent	20,000 lb.	3.472 lb.
Reclaiming oil (solvenol #2)	24,000 gal.	4.166 gal/hr.
Reclaiming oil (hercosol 8550)	72,000 gal.	12.500 gal/hr.
Ground bituninous coal (Austin)	250 ,000 lb.	43.402 lb/hr
Ground whiting	7,285,000 lb.	1264.756 lb/hr.

FOR OFFICIAL USE ONLY
Premise No. 03/17/01/0102
Source No. S/039

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

2. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 30" DIA

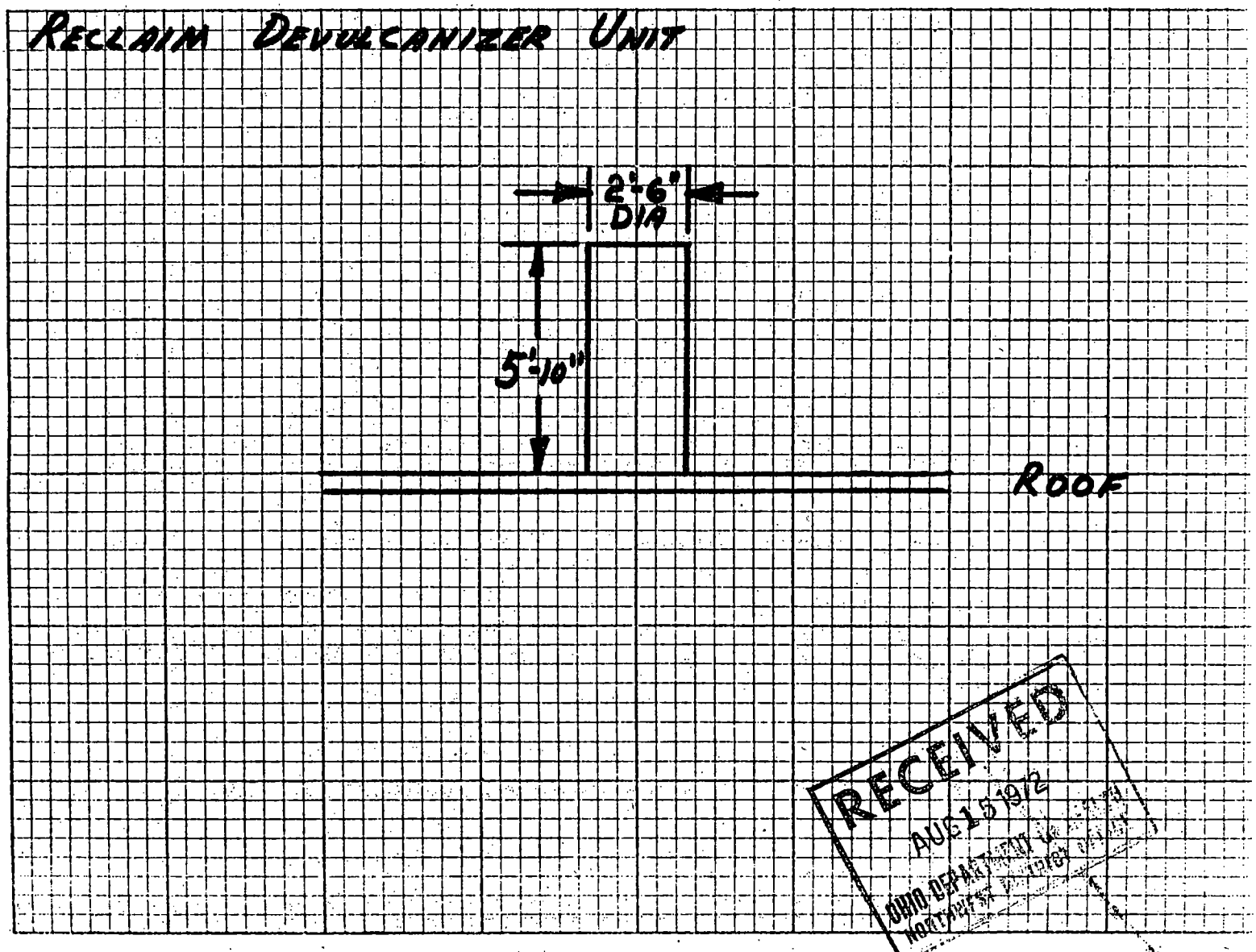
3. Height: Above roof 5'-10" ft. Above ground 17'-10" ft.

4. Exit gas: Temp. _____ °F. Volume _____ ACFM Velocity _____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03 / 17 / 01 / 10102
Source No. S/040

DATA SHEET
STACKS AND OTHER EGRESS POINTS

Facility Name: Swan Rubber Division of Amerace-Esna — Person to Contact: Jack McCoy

Facility Address: Beal Avenue (Street) — Mailing Address: Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone: 419-562-1011 (Area Code / Number)

Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 28" DIA

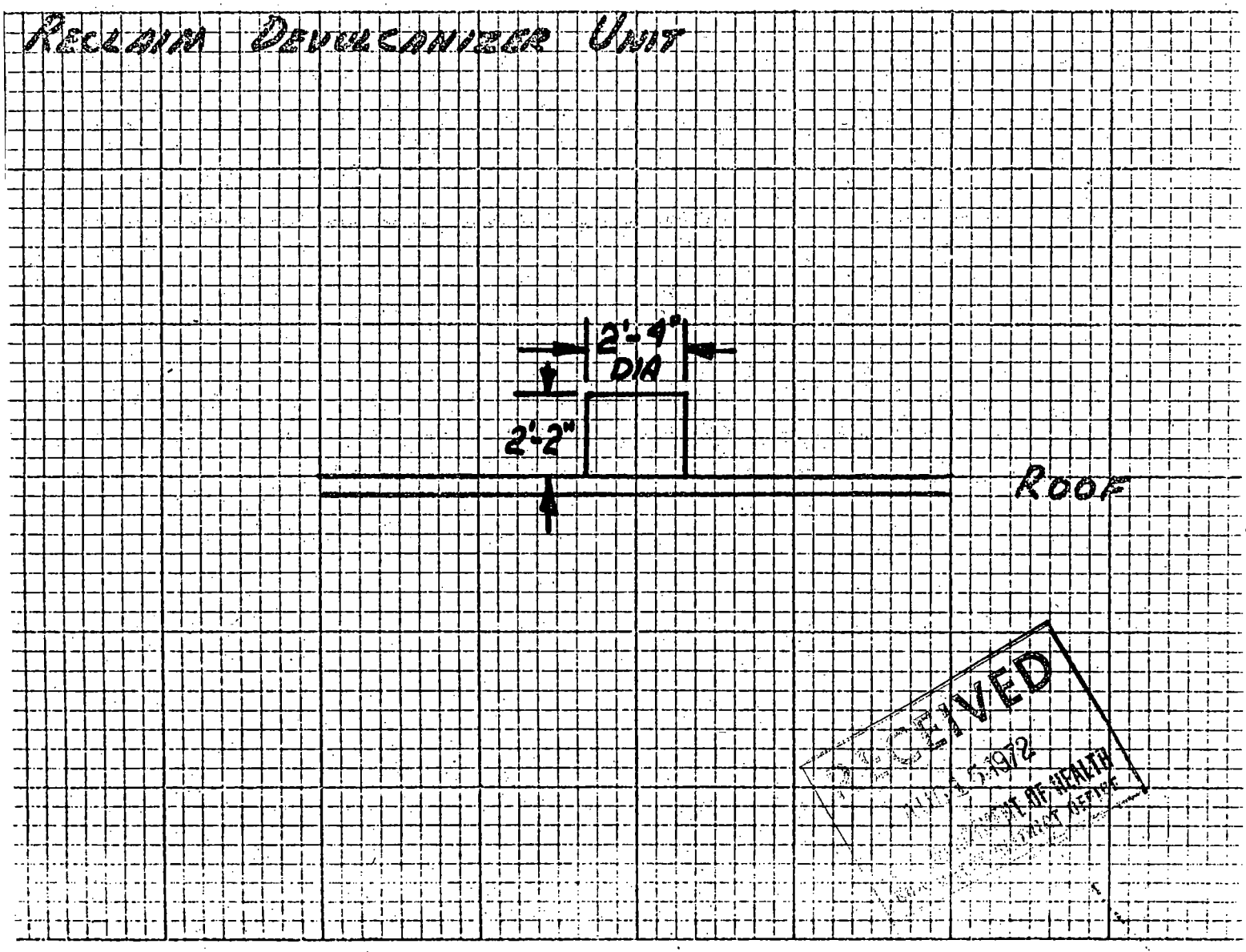
Height: Above roof 2'-2" ft. Above ground 14'-2" ft.

Exit gas: Temp. _____ °F. Volume _____ ACFM Velocity _____ feet per minute

Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one sour or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03/47/01/0102
Source No. S/041

DATA SHEET
STACKS AND OTHER EGRESS POINTS

. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 28" DIA

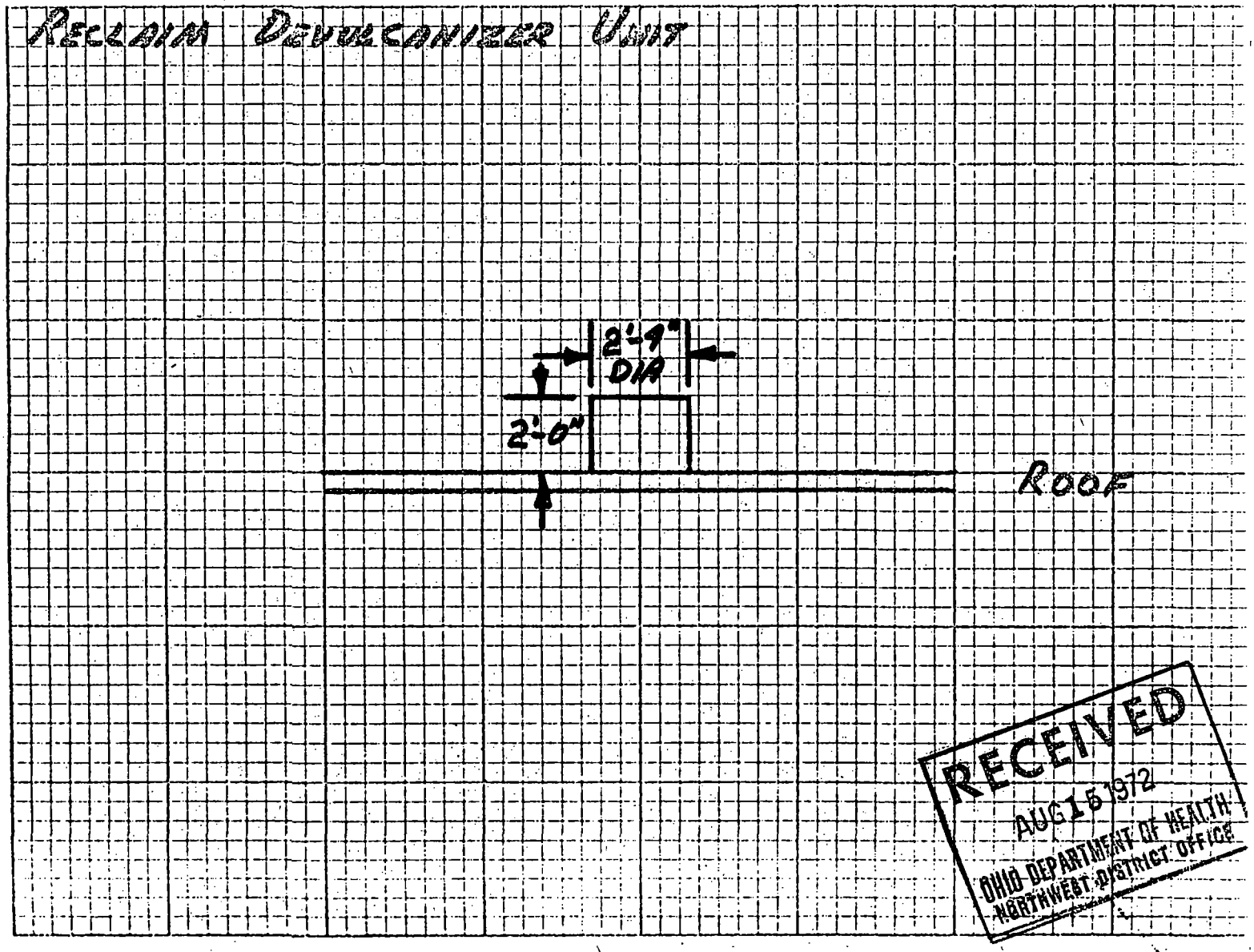
. Height: Above roof 2'-0" ft. Above ground 14'-0" ft.

. Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____ feet per minute

. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one sour or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03 17 101 10102
Source No. 5/042

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus (City, Village or Township) Crawford (County) 44820 (Zip) Bucyrus (City) Ohio (State) 44820 (Zip)

Telephone 419-562-1011 (Area Code / Number)

2. Type: ☐ Round ☒ Rectangular - top inside dimension(s) (L & W or Diam.) 25"x19"

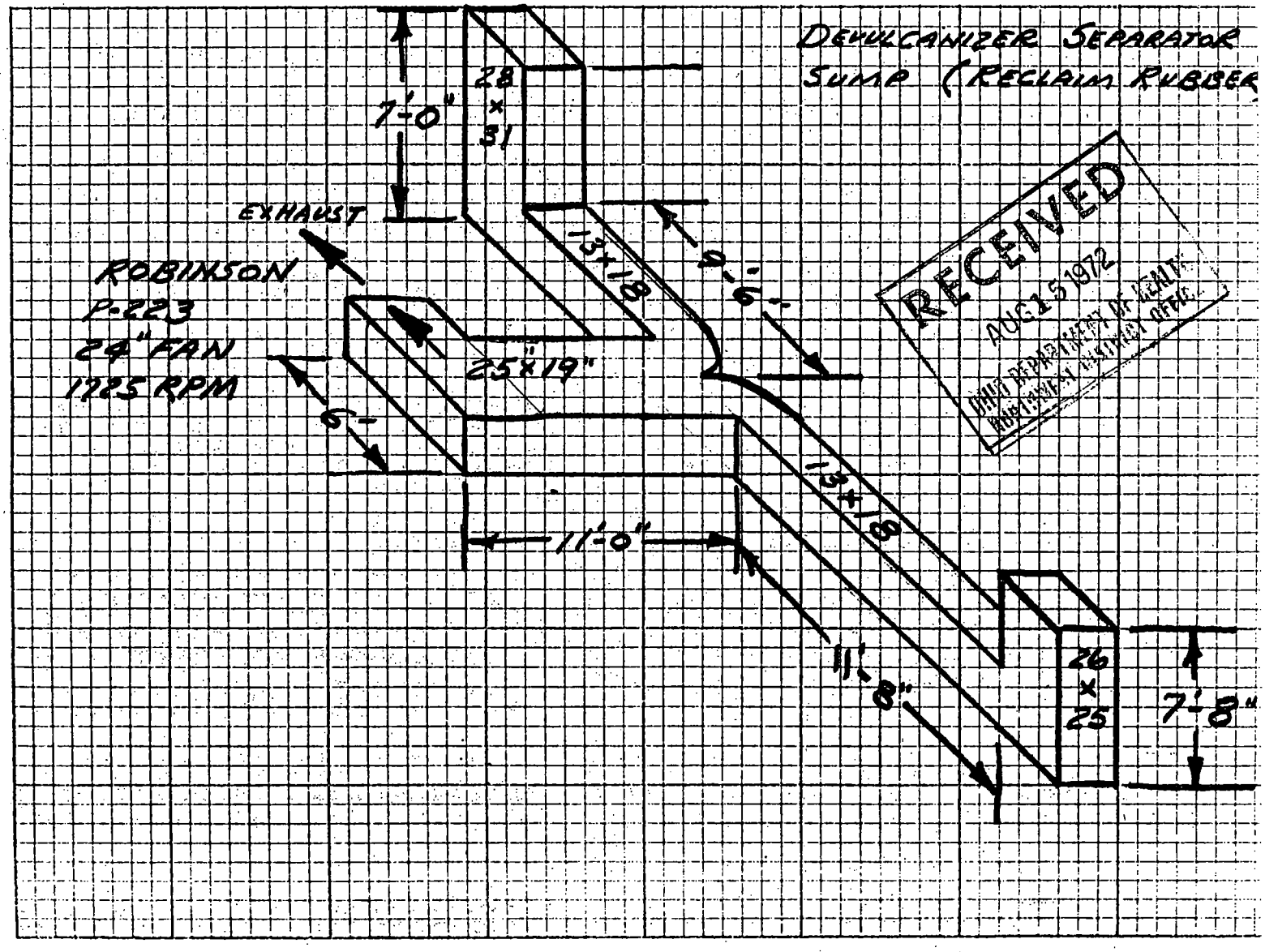
3. Height: Above roof 19" ft. Above ground 15'-0" ft.

4. Exit gas: Temp. ____°F. Volume ____ ACFM Velocity ____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type ____

Manufacturer ____ Make or model ____ Pollutant ____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

VARIANCE PERMIT COMPLIANCE TIME SCHEDULE -

The following COMPLIANCE TIME SCHEDULE is a part of the permit application for:

TYPE OF EQUIPMENT: Rubber Reclaim

COMPANY ID FOR EQUIPMENT: Rubber Reclaim
(describe source equipment)

Located at the:

FACILITY NAME: Swan Rubber

FACILITY ADDRESS: Beal Avenue
Bucyrus, Ohio 44820

(indicates facility name and location)

Indicated below are the steps, or milestones, which will be taken by the above air contaminant source and the time required (in months) to complete each step as well as the time required for the total program. This COMPLIANCE TIME SCHEDULE will become a condition of the variance permit upon approval.

MILESTONE	PERIOD (MONTHS)		
1) Submission of final control plans for source*	0	months	2/73
2) Awarding of contracts for emission control system or issuing of purchase orders for component parts to accomplish emission control or process modification	NONE	months	
3) Initiation of on-site construction or installation of emission control equipment or process modification	11/71	months	
4) Completion of on-site construction or installation of emission control equipment or process modification	12	months	12/31/7
5) Achievement of final compliance with all applicable State and Federal rules and regulations	12	months	12/31/7
6) Additional milestone (Specify)		months	
7) Additional milestone (Specify)		months	
8) Additional milestone (Specify)		months	
9) Additional milestone (Specify)		months	

* To Ohio EPA

NO LONGER IN

FOR OFFICIAL USE ONLY
Premise No. 03/17/01 10102
Source No. P/004

APPLICATION FOR PERMIT TO PROCESS

DELETE

1. Facility Name Swan Rubber-Div. of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue Mailing Address Beal Avenue

Bucyrus (City, Village or Township) Crawford (County) 44820 (Zip) Bucyrus, (City) Ohio (State) 4482 (Zip)

Telephone 419-562-1011 (Area Code / Number)

2. This application is submitted for:
   - ☐ Permit to operate an existing source
   - ☐ Permit to construct a new source or modify an existing source
   - ☒ Variance from regulation(s) _____ for _____ months

3. Check-list of information to accompany this application:
   - ☒ Plans and drawings
   - ☐ Emission tests or calculations
   - ☒ Process flow diagram
   - ☐ Compliance time schedule
   - ☐ Construction schedule
   - ☐ Additional information

4. Name of process Reclaim refiners (Rubber) Year installed 1950-1964
5. Product of this process Rubber reclaim
6. Process equipment Rubber mills Your identification _____
7. Manufacturer Farrel (3) & Adamson (9) Make or model 21 x 24 x 32
8. Capacities (lbs/hr): Rated _____ Maximum _____

OPERATING INFORMATION

9. Normal operating schedule: hrs/day 24 days/wk 5 wks/yr 48
10. Percent annual production (finished units) by season: Winter 25 Spring 25 Summer 25 Fall 25
11. Hourly production rates (lbs): Average _____ Maximum _____
12. Annual production (indicate units) 19,309,000#
13. Projected percent annual increase in production _____
14. Method of exhaust ventilation: ☒ Stack ☐ Window fan ☐ Roof vent ☐ Other, describe _____
15. Type of process: ☒ Continuous ☐ Batch
16. If batch, minutes per cycle _____ minutes between cycles _____
17. Does process involve any of the following (check all applicable)? ☐ Lead ☐ Asbestos ☐ Beryllium ☐ Mercur
18. Materials used in process (include organic materials)

List of Raw Materials	Principal Use	Amount (lbs./hr.)

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9. This application must include a detailed process flow diagram. Show entry [illegible] of all raw materials, intermediate products, by-products and finished products. Label all [illegible] including airborne contaminants and other waste materials.

Important Note: If emissions from this source have been determined by source tests, material balances or emission factors, include such data and supporting calculations with application.

RAW MATERIALS

RUBBER RECLAIM

DESCRIPTION	TOTAL	LB/HR
Tires with beads	12,750,000 lb.	2,213.541 #/hr.
Debeaded tires	200,000	34.722
Cab tire scrap	40,000	6.944
MR	2,000,000	347.222
Dark aromatic pet plasticizer	(L x 777) 204,000 gal.	35.416 gal/hr.
Reclaiming agent	20,000 lb.	3.472 lb.
Reclaiming oil (solvenol #2)	24,000 gal.	4.166 gal/hr.
Reclaiming oil (hercosol 8550)	72,000 gal.	12.500 gal/hr.
Ground bituninous coal (Austin)	250 ,000 lb.	43.402 lb/hr
Ground whiting	7,285,000 lb.	1264.756 lb/hr.

FOR OFFICIAL USE ONLY
Premise No. 03/17/01/0102
Source No. P/003

APPLICATION FOR PERMIT TO PROCESS

(A) MAD #10
5/16/74

1. Facility Name Swan Rubber-Div. of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue Mailing Address Beal Avenue

Bucyrus	Crawford	44820	Bucyrus,	Ohio	4482(
City, Village or Township	County	Zip	City	State	Zi

Telephone 419-562-1011
Area Code Numb

2. This application is submitted for:
   - [X] Permit to operate an existing source
   - [ ] Permit to construct a new source or modify an existing source
   - [ ] Variance from regulation(s) _____ for _____ months
3. Check-list of information to accompany this application:
   - [X] Plans and drawings
   - [ ] Emission tests or calculations
   - [X] Process flow diagram
   - [ ] Compliance time schedule
   - [ ] Construction schedule
   - [ ] Additional information
4. Name of process PVC plastic reclaim banbury extruder Year installed _____
5. Product of this process Compounded reclaim
6. Process equipment Banbury Your identification _____
7. Manufacturer Farrel Make or model 3Z
8. Capacities (lbs/hr): Rated _____ Maximum _____

OPERATING INFORMATION

9. Normal operating schedule: hrs/day 24 days/wk 3 wks/yr 48½
10. Percent annual production (finished units) by season: Winter 25 Spring 25 Summer 25 Fall 25
11. Hourly production rates (lbs): Average _____ Maximum _____
12. Annual production (indicate units) 9,532,517#
13. Projected percent annual increase in production _____
14. Method of exhaust ventilation: [ ] Stack [ ] Window fan [X] Roof vent [ ] Other, describe _____
15. Type of process: [ ] Continuous [X] Batch
16. If batch, minutes per cycle _____ minutes between cycles _____
17. Does process involve any of the following (check all applicable)? [ ] Lead [ ] Asbestos [ ] Beryllium [ ] Mercur
18. Materials used in process (include organic materials)

List of Raw Materials	Principal Use	Amount (lbs./hr.)

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NORTHWEST DISTRICT OFFICE

19. This application must include a detailed process flow diagram. Show entry and exit points of all raw materials, intermediate products, by-products and finished products. Label all materials including airborne contaminants and other waste materials.

Important Note: If emissions from this source have been determined by source tests, material balances or emission factors, include such data and supporting calculations with application.

RAW MATERIALS

PLASTIC RECLAIM

DESCRIPTION	TOTAL	LB/HR.
Soft PVC Plastisol (boot scrap)	5,906,000 lb.	1025.347 lb/hr
Polyethylene (AC 617)	25,000	4.340
Plasticizer for vinyl reclaim	22,000 gal.	3.819 gal/hr
Plasticizer filter cake	865,000 lb.	50.173 lb/hr
Ground whiting	7,285,000 lb.	1264.756 lb/hr

FOR OFFICIAL USE ONLY
Premise No. 03/17/01/10102
Source No. S/024

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus (City, Village or Township) Crawford (County) 44820 (Zip) Bucyrus (City) Ohio (State) 44820 (Zip)

Telephone 419-562-1011 (Area Code) (Number)

2. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 28" DIA

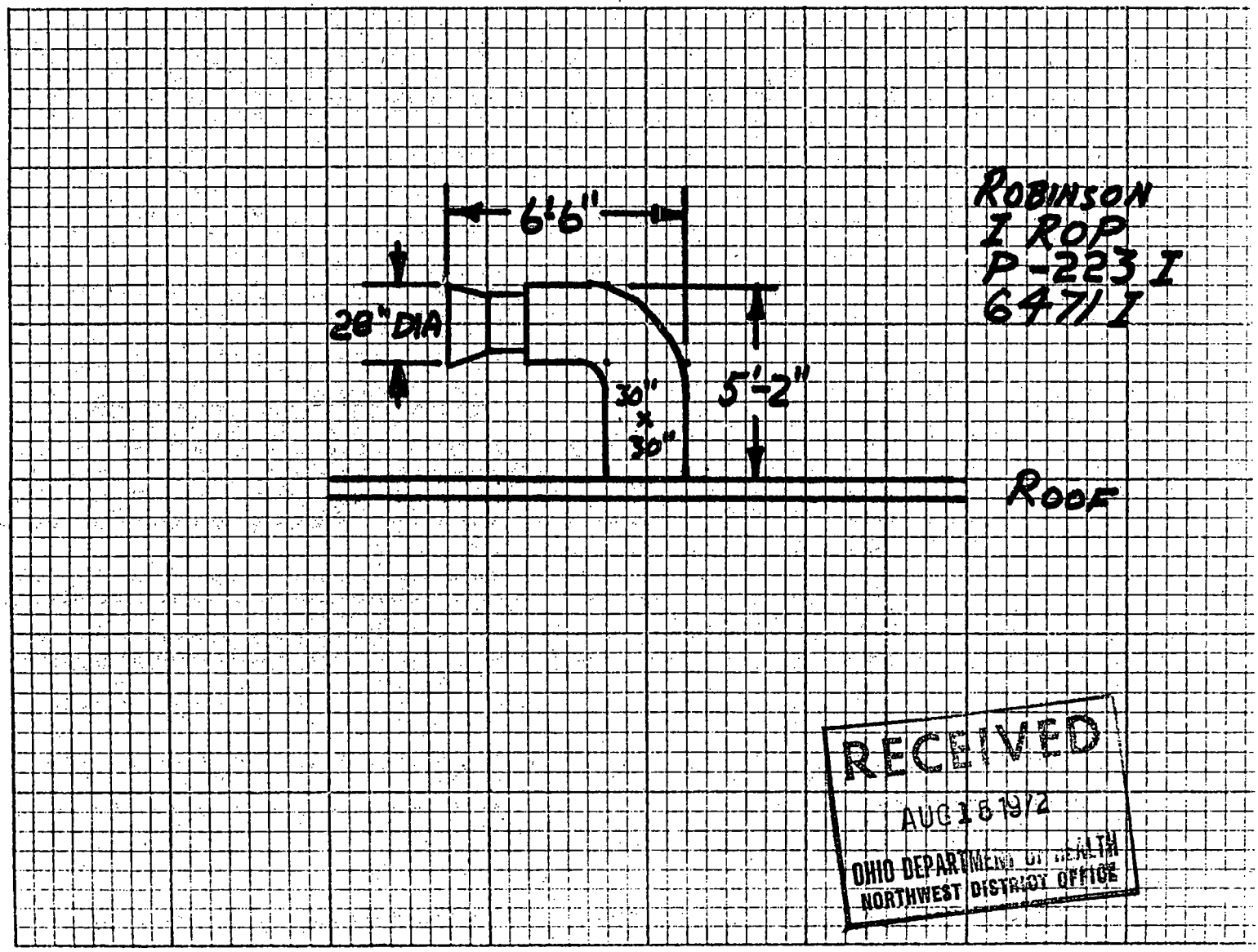
3. Height: Above roof 5'-2" ft. Above ground 18'-0" ft.

4. Exit gas: Temp. _____ °F. Volume _____ ACFM Velocity _____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one sour or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03107101101102
Source No. S1025

DATA SHEET
STACKS AND OTHER EGRESS POINTS

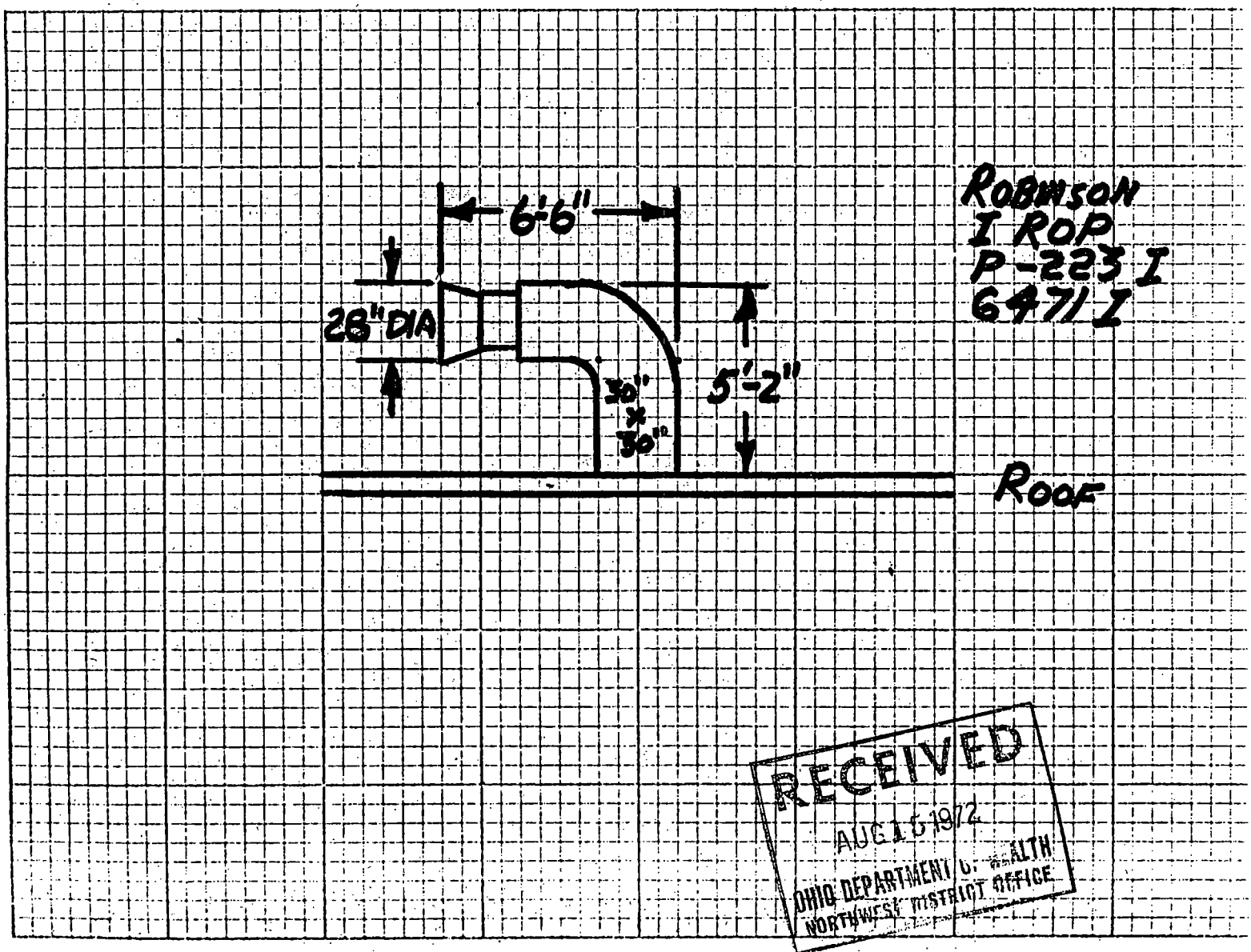
Facility Name: Swan Rubber Division of Amerace-Esna
Person to Contact: Jack McCoy

Facility Address: Beal Avenue (Street)
Bucyrus (City, Village or Township) Crawford (County) 44820 (Zip)

Mailing Address: Beal Avenue (Street)
Bucyrus (City) Ohio (State) 44820 (Zip)

Telephone: 419-562-1011 (Area Code) (Number)

1. Type: [X] Round [ ] Rectangular - top inside dimension(s) (L & W or Diam.) 28" DIA
2. Height: Above roof 5'-2" ft. Above ground 18'-0" ft.
3. Exit gas: Temp. _____ °F. Volume _____ ACFM Velocity _____ feet per minute
4. Continuous monitoring equipment: [ ] Yes [X] No. If yes, indicate: Type _____
   Manufacturer _____ Make or model _____ Pollutant _____
5. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one sour or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03/07/01/0102
Source No. 5/026

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

2. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 34" DIA

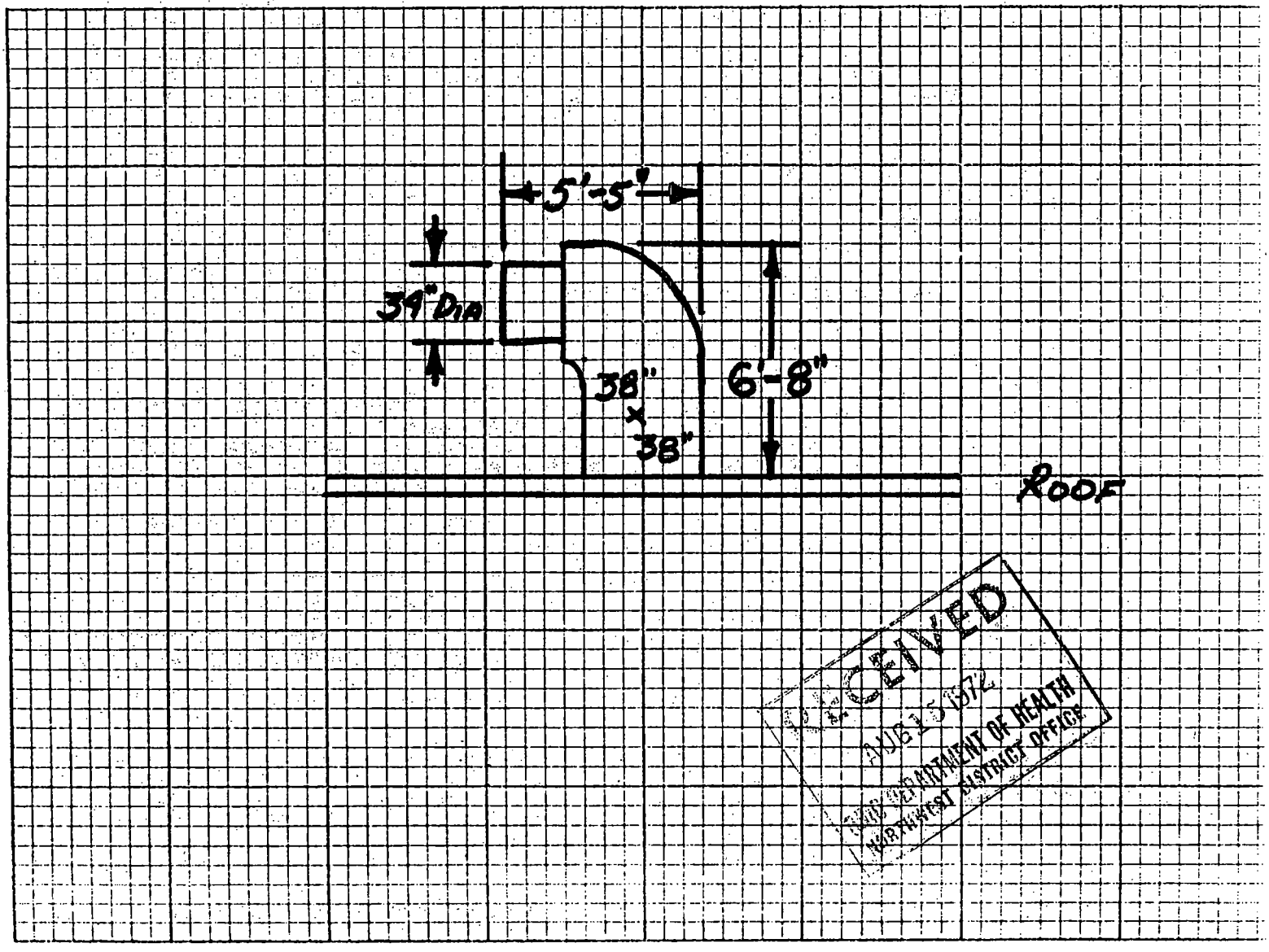
3. Height: Above roof 6'-8" ft. Above ground 19'-6" ft.

4. Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03 11 7101 10102
Source No. P1002

APPLICATION FOR PERMIT TO PROCESS

(A) 5/16/74
MAD 890

1. Facility Name Swan Rubber-Div. of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue Mailing Address Beal Avenue

Bucyrus	Crawford	44820	Bucyrus,	Ohio	4482(
City, Village or Township	County	Zip	City	State	Zi

Telephone 419-562-1011 (Area Code / Numb)

2. This application is submitted for:
   - [X] Permit to operate an existing source
   - [ ] Permit to construct a new source or modify an existing source
   - [ ] Variance from regulation(s) _____ for _____ months
3. Check-list of information to accompany this application:
   - [X] Plans and drawings
   - [ ] Emission tests or calculations
   - [X] Process flow diagram
   - [ ] Compliance time schedule
   - [ ] Construction schedule
   - [ ] Additional information
4. Name of process Plastic cover machiness-cyclohexanone units Year installed 1955
5. Product of this process Plastic hose
6. Process equipment Extruders and spray units Your identification None
7. Manufacturer NRM and owner Make or model pacemaker 70
8. Capacities (lbs/hr): Rated _____ Maximum _____

OPERATING INFORMATION

9. Normal operating schedule: hrs/day 24 days/wk 5 wks/yr 50
10. Percent annual production (finished units) by season: Winter 30 Spring 30 Summer 20 Fall 20
11. Hourly production rates (lbs): Average 5682 Maximum _____
12. Annual production (indicate units) 33,000,000
13. Projected percent annual increase in production _____
14. Method of exhaust ventilation: [X] Stack [ ] Window fan [ ] Roof vent [ ] Other, describe _____
15. Type of process: [X] Continuous [ ] Batch
16. If batch, minutes per cycle _____ minutes between cycles _____
17. Does process involve any of the following (check all applicable)? [ ] Lead [ ] Asbestos [ ] Beryllium [ ] Mercur
18. Materials used in process (include organic materials)

List of Raw Materials	Principal Use	Amount (lbs./hr.)
PVC		5500#/hr
Cyclohexanone		2.3 gal/hr

19. This application must include a detailed process flow diagram. Show entry and exit points of all raw materials, intermediate products, by-products and finished products. Label all materials including airborne contaminants and other waste materials.

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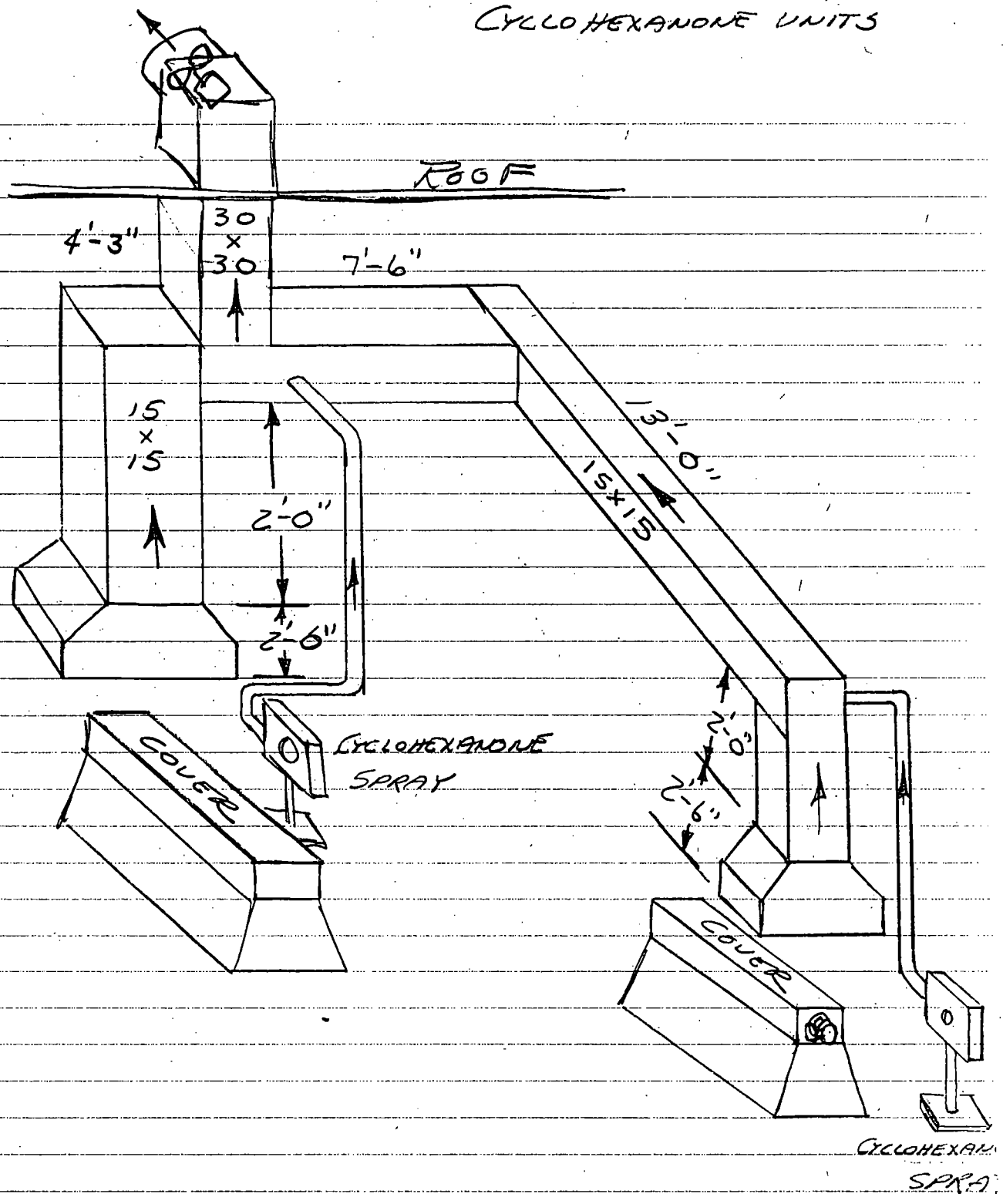
NORTHWEST DISTRICT OFFICE

Important Note: If emissions from this source have been determined by source tests, material balances or emission factors, include such data and supporting calculations with this application.

AP-PS-02

PLASTIC COVER &
CYCLOHEXANONE UNITS



FOR OFFICIAL USE ONLY
Premise No. 03 17 01 0102
Source No. S 1022

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

2. Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

3. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 24" DIA

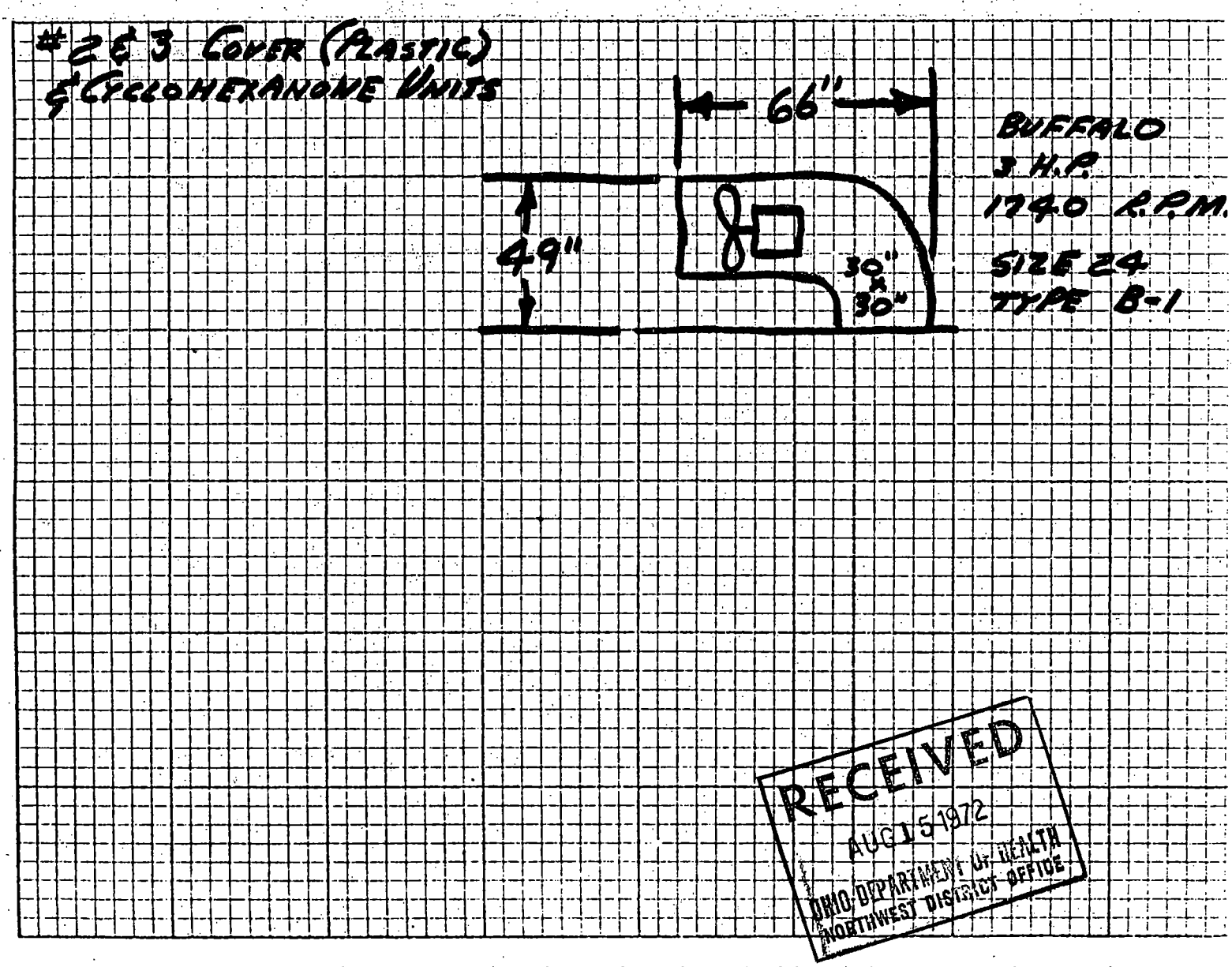
4. Height: Above roof 4'-1" ft. Above ground 21'-1" ft.

5. Exit gas: Temp. ____ °F. Volume ____ ACFM Velocity ____ feet per minute

6. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type ____

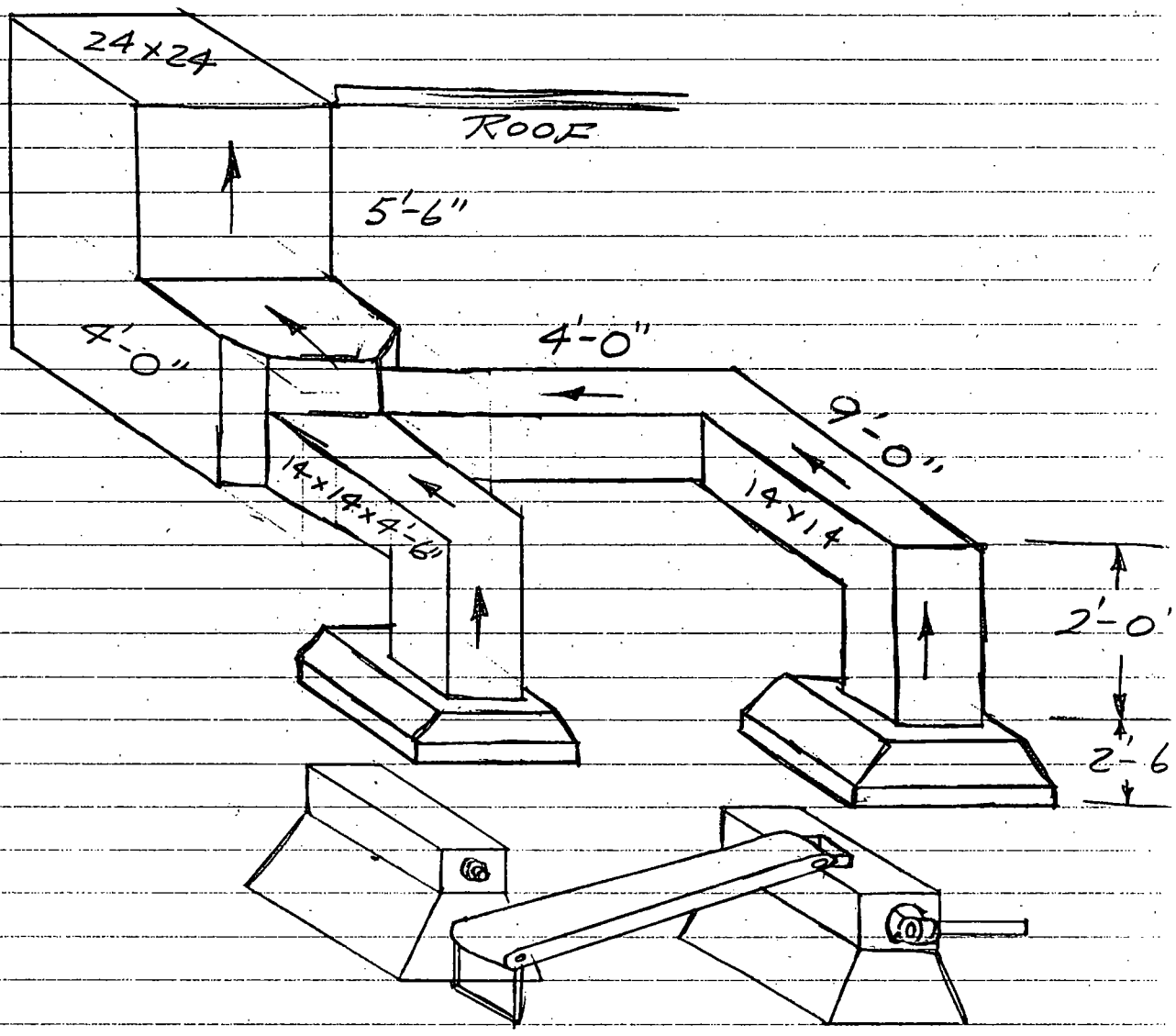
Manufacturer ____ Make or model ____ Pollutant ____

7. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one sour or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

Cover Machine



Cover Machine

FOR OFFICIAL USE ONLY
Premise No. 03/17/01/10102
Source No. 3/023

DATA SHEET
STACKS AND OTHER EGRESS POINTS

Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

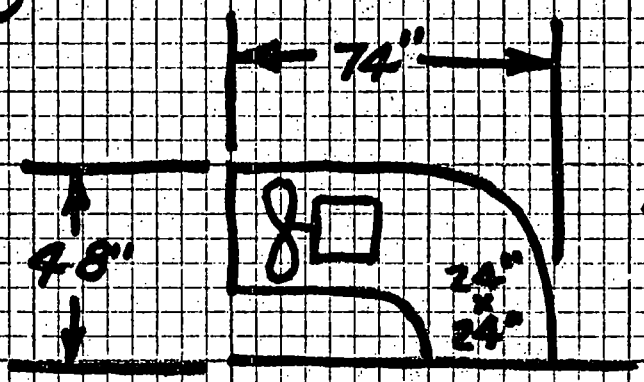
Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

1. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 24" DIA
2. Height: Above roof 4'-0" ft. Above ground 21'-0" ft.
3. Exit gas: Temp. ____ °F. Volume ____ ACFM Velocity ____ feet per minute
4. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type ____
   Manufacturer ____ Make or model ____ Pollutant ____
5. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one sour or control device discharges into this stack show all connections.

#1 COVER (PIGGY-BACK) PLASTIC



BUFFALO
3 H.P.
1740 R.P.M.
SIZE 24
TYPE B-1
24" FAN

Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

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CYCLOHEXANOL AND CYCLOHEXANONE

The two most important derivatives of cyclohexane are the monohydric alcohol, cyclohexanol, and the monoketone, cyclohexanone.

Cyclohexanol

Cyclohexanol, $CH_2(CH_2)_4CHOH$, is a colorless, rather viscous liquid with a camphoraceous odor. It is used chiefly as a chemical intermediate, as a stabilizer and homogenizer for various soap and detergent emulsions, and as a solvent for lacquers and varnishes.

Cyclohexanol was first prepared by Baeyer in 1894 by the treatment of 4-iodocyclohexanol (prepared from 1,4-cyclohexanediol and dilute hydriodic acid) with zinc dust in glacial acetic acid. Later Ipatieff prepared cyclohexanol by the catalytic hydrogenation of phenol at elevated temperatures and pressures.

Properties. For the properties of cyclohexanol, see Table 1.

Table 1. Properties of Cyclohexanol and Cyclohexanone

	Cyclohexanol	*Cyclohexanone*
mp, °C	25.15	−47
bp, °C	161.1	156.7
d_4^{20}	0.9493	0.9478
n_D^{25}	1.4648	
n_D^{20}		1.4507
vapor pressure, 25°C, mm Hg	1.1	
20°C, mm Hg		3.95
sp heat, 15–18°C, cal/g	0.417	0.433
viscosity, 25°C, cP	4.6	2.2
flash point, open cup, °C	67.2	54
soly in water, 10°C, g/100 g	4.2	15
30°C, g/100 g	4.3	5
soly of water in compound, 20°C, g/100 g	12.6	9.5
miscibility	miscible in all proportions with most organic solvents including those customarily used in lacquers	miscible with methanol, ethanol, acetone, benzene, *n*-hexone, nitrobenzene, ether, naphtha, xylene, ethylene, glycol, isoamylacetate, diethylamine, and most organic solvents
dissolves	many oils, waxes, gums, and resins	cellulose nitrate, acetate, and ethers, vinyl resins, raw rubber, waxes, fats, shellac, basic dyes, oils, latex, bitumen, kaure, elemi, and many other organic compounds

Cyclohexanol shows most of the typical reactions of secondary alcohols. It reacts with organic acids to form esters and with halogen acids to form the corresponding halides. Dehydrating agents convert cyclohexanol to cyclohexene, C_6H_{10}.

Catalytic dehydrogenation or mild oxidation of cyclohexanol yields cyclohexanone. Oxidizing agents such as nitric acid or alkaline potassium permanganate convert cyclohexanol into adipic acid, $HOOC(CH_2)_4COOH$.

Manufacture. Cyclohexanol is prepared commercially by the catalytic air oxidation of cyclohexane or by the catalytic hydrogenation of phenol. The oxidation of cyclohexane is used for most production (1). Fundamentally, this is effected in the liquid phase by means of an oxygen-containing gas at a temperature of 120–250°C and a pressure high enough to keep the cyclohexane from vaporizing, and in the presence of an oxidation catalyst such as cobalt naphthenate (2). Since issuance of the basic patents (2), several additional patents have been granted to cover modifications (1). With the oxidation method, a mixture of cyclohexanol and cyclohexanone is first obtained. The unreacted cyclohexane is removed from the crude reaction product by distillation and recycled to the oxidation step. The mixture of cyclohexanol and cyclohexanone is then recovered by further distillation and separated by conventional vacuum-fractionating techniques. The hydrogenation of phenol is usually carried out at elevated temperatures and pressures in the presence of hydrogenation catalysts such as copper (3), nickel (4), a mixture of copper and nickel (5), or nickel oxide associated with chromic oxide (6).

Specifications and Containers. Commercial products are offered in two grades; one grade contains 2.25% methanol as an antifreeze and the other grade contains no methanol. Specifications for the unmodified product call for a minimum freezing point of 23°C, a boiling range of 160–162.4°C, a maximum of 0.5% ketone as cyclohexanone, and a maximum of 0.01% phenol. The grade containing the antifreeze must pass specifications for unmodified grade before the methanol is added.

Cyclohexanol is shipped in 55-gal drums, tank cars, and tank trucks. Drums carry the following warning label: "Caution—Vapor Harmful. Use only with adequate ventilation. Avoid prolonged breathing of vapor. Avoid prolonged or repeated contact with skin." The price in June 1964 was 28¢/lb in tank car or tank truck quantities.

Analytical Methods. The most general procedure for determining cyclohexanol is based on acetylation with acetyl chloride (7). The sample containing cyclohexanol is treated with acetyl chloride and pyridine at elevated temperatures, and following hydrolysis, the excess acid is titrated with sodium hydroxide solution. Aldehydes and easily hydrolyzed esters interfere with this method. For samples containing high concentrations of acids and easily hydrolyzed esters but no aldehydes or ketones, an alternate procedure is used (8). This procedure involves treatment at elevated temperatures of the sample containing cyclohexanol with acetic acid containing boron trifluoride catalyst. The water formed in the esterification reaction is then determined by the Karl Fischer method (see Aquametry). For analysis based on micro procedures, acetic anhydride is the preferred acetylating agent (22).

Cyclohexanol can be determined colorimetrically by reaction with *p*-hydroxybenzaldehyde in sulfuric acid (9). This method can be used in the presence of cyclohexanone and cyclohexane. Cyclohexanol and cyclohexanone both show a maximum absorbancy at 535 mμ but at 625 mμ the absorption by cyclohexanone is negligible, whereas cyclohexanol still shows appreciable absorption. Gas–liquid chromatography can be used also for the determination of cyclohexanol in mixtures with cyclohexanone and in the presence of small amounts of impurities, such as cyclohexane, cyclohexene, and water (10).

Health and Safety Factors. Cyclohexanol is known to be slightly to moderately toxic (11,12). The LD_{50} for rats is 2060 mg/kg of body weight (13). Contact with the skin may cause dermatitis in sensitive persons (11). It is also irritating to the mucous membranes. Prolonged inhalation or ingestion of small amounts can cause nausea, gastrointestinal disturbances, slight nervous symptoms, and trembling. The threshold limit value in air for a normal workday is 50 ppm by vol (14). The hazards of industrial exposure to vapors of cyclohexanol at room temperature, however, are believed to be limited by the low vapor pressure and the low rate of evaporation of this compound.

Precautions which should be observed as a matter of course in using cyclohexanol include adequate and proper ventilation, avoidance of prolonged breathing of vapor or contact of the liquid with the skin, avoidance of internal consumption, and protection of the eyes against splashing liquids.

Uses. The most important use for cyclohexanol is as an intermediate in the production of adipic acid (qv), 90% of which is employed in the United States in the manufacture of nylon-6,6, a polymer of adipic acid and hexamethylenediamine. One manufacturer also uses the adipic acid for production of the hexamethylenediamine. The next-important use is as an intermediate in the production of ϵ-caprolactam, $NH(CH_2)_5CO$, which is used in the manufacture of nylon-6 polymer.

The amount of refined cyclohexanol used in other applications, according to U.S. Tariff Commission figures, was about 5 million lb in 1963. One major use has been in the manufacture of esters for use as plasticizers, ie, cyclohexyl and dicyclohexyl phthalates (see Esters; Plasticizers). In the finishes industry, cyclohexanol is used as a solvent for lacquers, shellacs, and varnishes. Its low volatility helps to improve secondary flow and to prevent blushing. Also, it improves the miscibility of cellulose nitrate and resin solutions and helps to maintain homogeneity during drying of lacquers. Cyclohexanol is used as a stabilizer and homogenizer for soaps and synthetic detergent emulsions. It is used also by the textile industry as a dye solvent and kier-boiling assistant.

Derivative. Commercial methylcyclohexanol, $CH_3C_6H_{10}OH$, is a slightly viscous, straw-colored liquid, which is a mixture of *o*-methylcyclohexanol (b_{745} 164.5–165.5°C), *m*-methylcyclohexanol (b_{769} 173.7–174°C), and *p*-methylcyclohexanol (b_{745} 172.5–173°C). The commercial product, made by the catalytic hydrogenation of mixed cresols, has a boiling range of 155–180°C; $d_{15.5}^{15.5}$ 0.924 ± 0.003; n_D^{20} 1.461. It is used as a solvent in lacquers, as an ingredient in soap-based spot removers, as a blending agent for special textile soaps and detergents, and in the manufacture of lubricating-oil additives.

Cyclohexanone

Cyclohexanone, $CH_2(CH_2)_4CO$, is a colorless, mobile liquid with an odor suggestive of peppermint and acetone. Cyclohexanone is used chiefly as a chemical intermediate and as a solvent for resins, lacquers, dyes, and insecticides.

Cyclohexanone was first prepared in 1893 by Wislicenus and Fraser by the dry distillation of calcium pimelate, $OOC(CH_2)_5COOCa$. Later, cyclohexanone was prepared by Bouveault by the catalytic dehydrogenation of cyclohexanol.

Properties. For the properties of cyclohexanone, see Table 1.

Cyclohexanone shows most of the typical reactions of ketones, in general, and aliphatic ketones, in particular. It reacts with hydroxylamine, phenylhydrazine, semicarbazide, Grignard reagents, hydrogen cyanide, sodium bisulfite, etc, to form the usual addition products. Cyclohexanone undergoes the various condensation reactions that are typical of ketones having α-methylene groups. Reduction converts cyclohexanone into cyclohexanol or cyclohexane. Oxidation with nitric acid converts cyclohexanone almost quantitatively into adipic acid, $HOOC(CH_2)_4COOH$.

Manufacture. Cyclohexanone may be produced by the catalytic air oxidation of cyclohexane, by the catalytic dehydrogenation of cyclohexanol, or by the oxidation of cyclohexanol. The catalytic air oxidation of cyclohexane, which is probably the most common method, produces a mixture of cyclohexanol and cyclohexanone, which is separated by the usual distillation techniques (2).

The catalytic dehydrogenation of cyclohexanol may be accomplished by reaction of the cyclic alcohol with a substance capable of taking up hydrogen, such as phenol, in the presence of hydrogenation catalysts at a temperature of 200°C (eq.1). A quantitative yield of cyclohexanone may thus be obtained (15). Cyclohexanone may also be prepared by passing a gaseous mixture containing an inert gas and not over 10% oxygen through cyclohexanol containing a small quantity of cyclohexanone as an initiator at elevated temperatures and pressures of at least 10 atm. The oxidation products of this reaction, cyclohexanone and adipic acid, may then be recovered and separated (16).

$$2\ C_6H_{11}OH + C_6H_5OH \rightarrow 3\ C_6H_{10}O \qquad (1)$$

Specification and Standards. One commercial product has specifications that call for a minimum of 99.70% cyclohexanone, a maximum of 0.05% water, a sp gr (25/25°C) of 0.9440–0.9460, a refractive index at 25°C of 1.4460–1.4490, and a distillation range to include 155.5°C, with 5–95% distilling within 1.5°C.

Cyclohexanone is shipped in 55-gal drums, tank cars, and tank trucks. Drums carry the following warning label: "Caution—Vapor Harmful. Keep away from heat and open flame. Use only with adequate ventilation. Avoid prolonged breathing of vapor. Avoid prolonged or repeated contact with skin." The price in June of 1964 was 31¢/lb in tank car and tank truck quantities.

Analytical Methods. Carbonyl as cyclohexanone may be determined by treating with hydroxylamine hydrochloride, which forms the oxime, as illustrated in the following equation:

$$\text{>CO} + NH_2OH.HCl \rightarrow \text{>CNOH} + H_2O + HCl$$

With materials containing low concentrations of acids, the liberated hydrogen chloride is titrated with sodium hydroxide, using an indicator (20), or electrometrically. In the electrometric methods, the sample is treated with hydroxylamine hydrochloride in 1:1 methanol–water solution adjusted to pH 3.5, and the liberated hydrogen chloride is titrated with sodium hydroxide to pH 3.5. In the presence of acids, a Karl Fisher procedure based on the water liberated may be used (21).

Gas–liquid chromatography can also be used for determination of cyclohexanone in mixtures with cyclohexanol and small amounts of impurities such as cyclohexane, cyclohexene, and water (10).

Health and Safety Factors. The physiological response of animals to cyclohexanone has been studied by several investigators (11,12,17,18). Primary irritation and defatting of the skin can result from substantial or prolonged contact with cyclohexanone. Inhalation exposure in excess of the recommended threshold limit value of 50 ppm by vol (19) will be uncomfortably irritating and not readily tolerated for prolonged periods.

The precautions usually observed when handling volatile solvents should be observed as a matter of course with cyclohexanone. These include adequate and proper ventilation, avoidance of prolonged breathing of vapor or contact of the liquid with the skin, avoidance of internal consumption, and protection of the eyes against splashing liquids.

Uses. The most important use for cyclohexanone is as a chemical intermediate in the production of adipic acid (qv). In the United States about 90% of the adipic acid produced is employed in the manufacture of nylon-6,6 polymer. In another important use, the oxime of cyclohexanone, $CH_2(CH_2)_4C{=}NOH$ (mp, 89–90°C), undergoes the Beckmann rearrangement with sulfuric acid to give ϵ-caprolactam (2-oxohexamethylenimine), $NH(CH_2)_5CO$ (mp, 65°C), which is used in the manufacture of nylon-6. Cyclohexanone is also used as a solvent (qv) and thinner for lacquers, especially those containing nitrocellulose or vinyl chloride polymer and copolymers, and as a general solvent for several synthetic resins including polyvinyl chloride and methacrylate ester polymers. Cyclohexanone is an excellent solvent for DDT, organic phosphorus insecticides, and many other similar materials. Cyclohexanone is used as a sludge solvent in oil for piston-type aircraft lubrication.

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R. D. Kralovec and H. B. Louderback
E. I. du Pont de Nemours & Co., Inc.

C003, C004

FOR OFFICIAL USE ONLY
Premise No. 03/17/001/0102
Source No. P1001

APPLICATION FOR PERMIT TO PROCESS

(A) 4/17/74
MAD 110

1. Facility Name: Swan Rubber-Div. of Amerace-Esna — Person to Contact: Jack McCoy

Facility Address: Beal Avenue — Mailing Address: Beal Avenue

Bucyrus	Crawford (County)	44820 (Zip)	Bucyrus,	Ohio	4482 (Zi)
City, Village or Township			City	State	

Telephone: 419-562-1011 (Area Code / Numb)

2. This application is submitted for:
   - [X] Permit to operate an existing source
   - [ ] Permit to construct a new source or modify an existing source
   - [ ] Variance from regulation(s) _____ for _____ months
3. Check-list of information to accompany this application:
   - [X] Plans and drawings
   - [ ] Emission tests or calculations
   - [X] Process flow diagram
   - [ ] Compliance time schedule
   - [ ] Construction schedule
   - [ ] Additional information
4. Name of process: Banbury rubber mills — Year installed: 1956-57-67-69
5. Product of this process: Compound stocks - rubber
6. Process equipment: Rubber mills — Your identification: _____
7. Manufacturer: Stewart Bolling -Erie Adamson — Make or model: 84"
8. Capacities (lbs/hr): Rated: 15,200 — Maximum: _____

4 UNITS w/ 2 BAGHOUSES
BAGHOUSES VENTED INTO PLANT DURING WINTER MONTHS

OPERATING INFORMATION

9. Normal operating schedule: hrs/day 16 — days/wk 5 — wks/yr 48
10. Percent annual production (finished units) by season: Winter 25 — Spring 25 — Summer 25 — Fall 25
11. Hourly production rates (lbs): Average 15,200 — Maximum 24,000
12. Annual production (indicate units) 58,000,000
13. Projected percent annual increase in production: None
14. Method of exhaust ventilation: [X] Stack [ ] Window fan [ ] Roof vent [ ] Other, describe: Horizontal forced ai
15. Type of process: [ ] Continuous [X] Batch
16. If batch, minutes per cycle 3 — minutes between cycles 4
17. Does process involve any of the following (check all applicable)? [ ] Lead [ ] Asbestos [ ] Beryllium [ ] Mercur
18. Materials used in process (include organic materials)

List of Raw Materials	Principal Use	Amount (lbs./hr.)
Attached sheets		

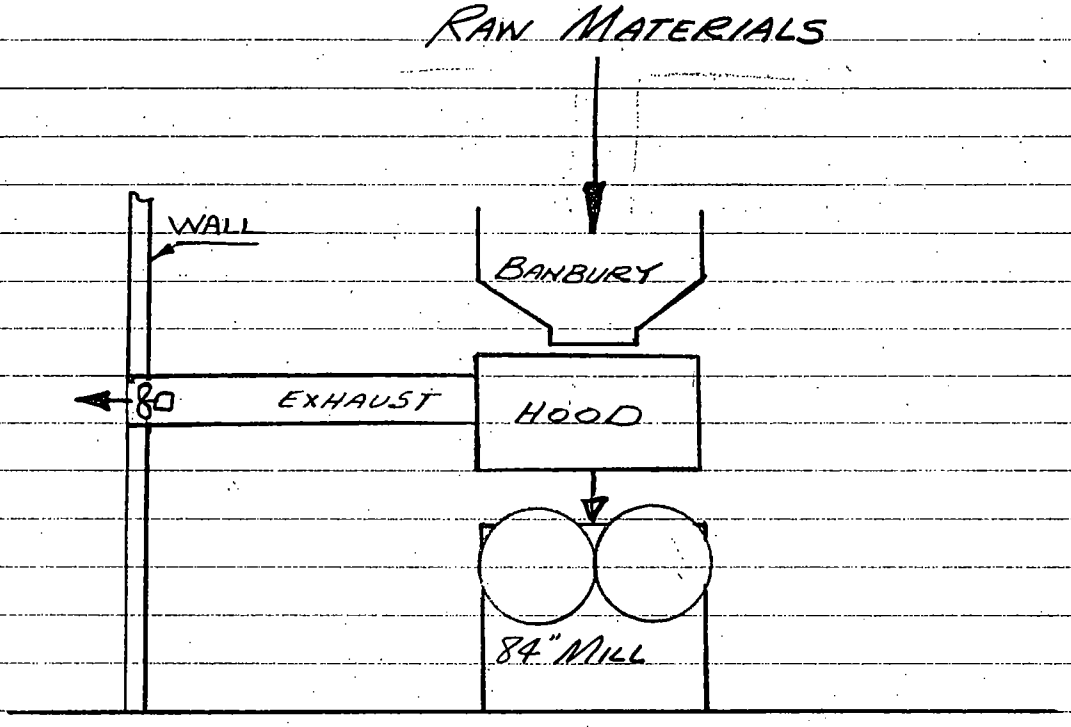
19. This application must include a detailed process flow diagram. Show entry and exit points of all raw materials, intermediate products, by-products and finished products. Label all materials which bring airborne contaminants and other waste materials.

RECEIVED
AUG 15 1972
OHIO DEPARTMENT OF HEALTH
NORTHWEST DISTRICT OFFICE

Important Note: If emissions from this source have been determined by source sampling, material balances or emission factors, include such data and supporting calculations with this application.

AP-PS-02

BANBURY RUBBER MILL



FOR OFFICIAL USE ONLY
Premise No. 03 17 04 0102
Source No. S 1018

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011 (Area Code / Number)

2. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 28" DIA.

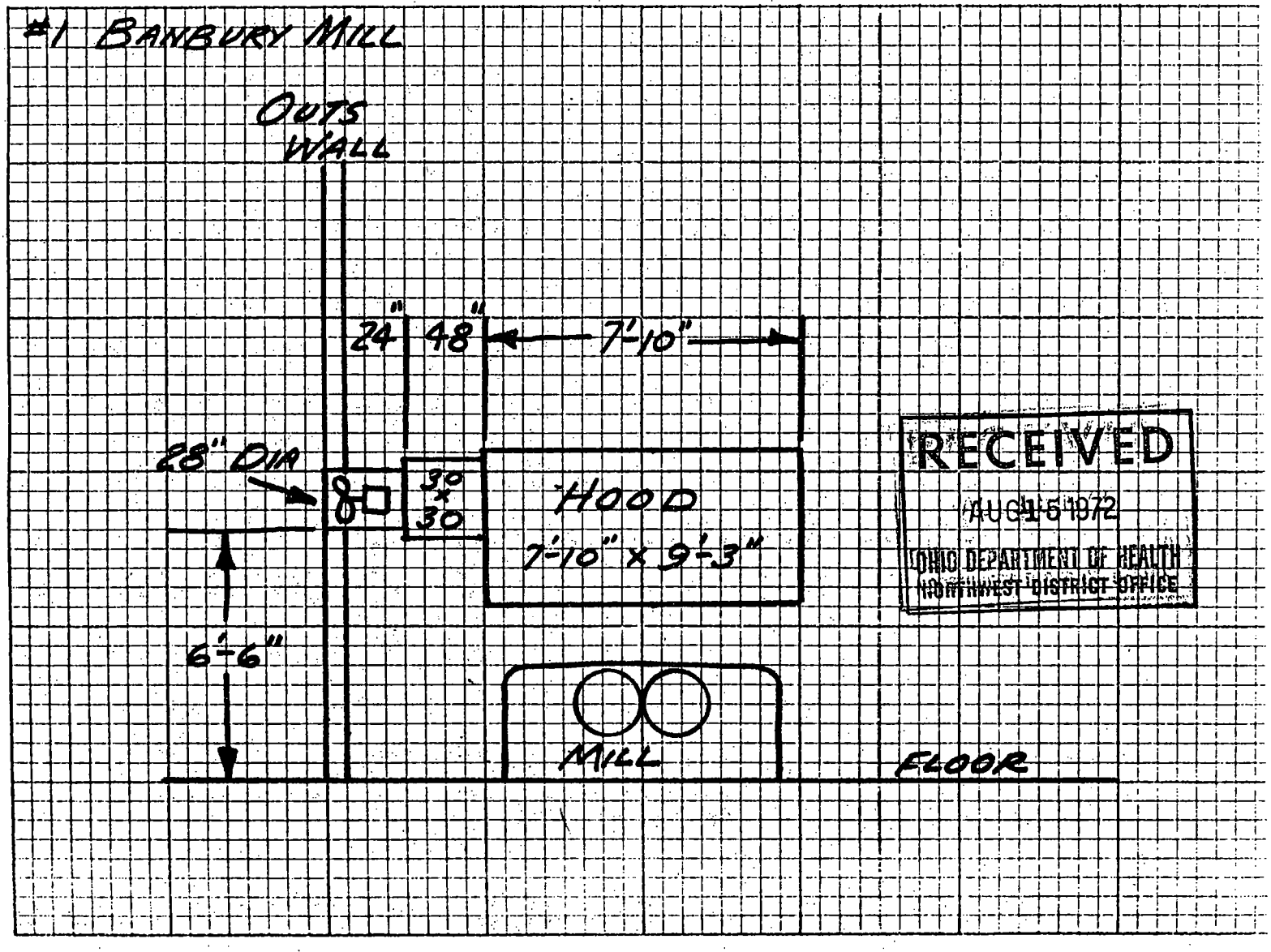
3. Height: Above roof ——— ft. Above ground 6'-6" ft.

4. Exit gas: Temp. _____ °F. Volume _____ ACFM Velocity _____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03 17 01 01 0102
Source No. S 1019

DATA SHEET
STACKS AND OTHER EGRESS POINTS

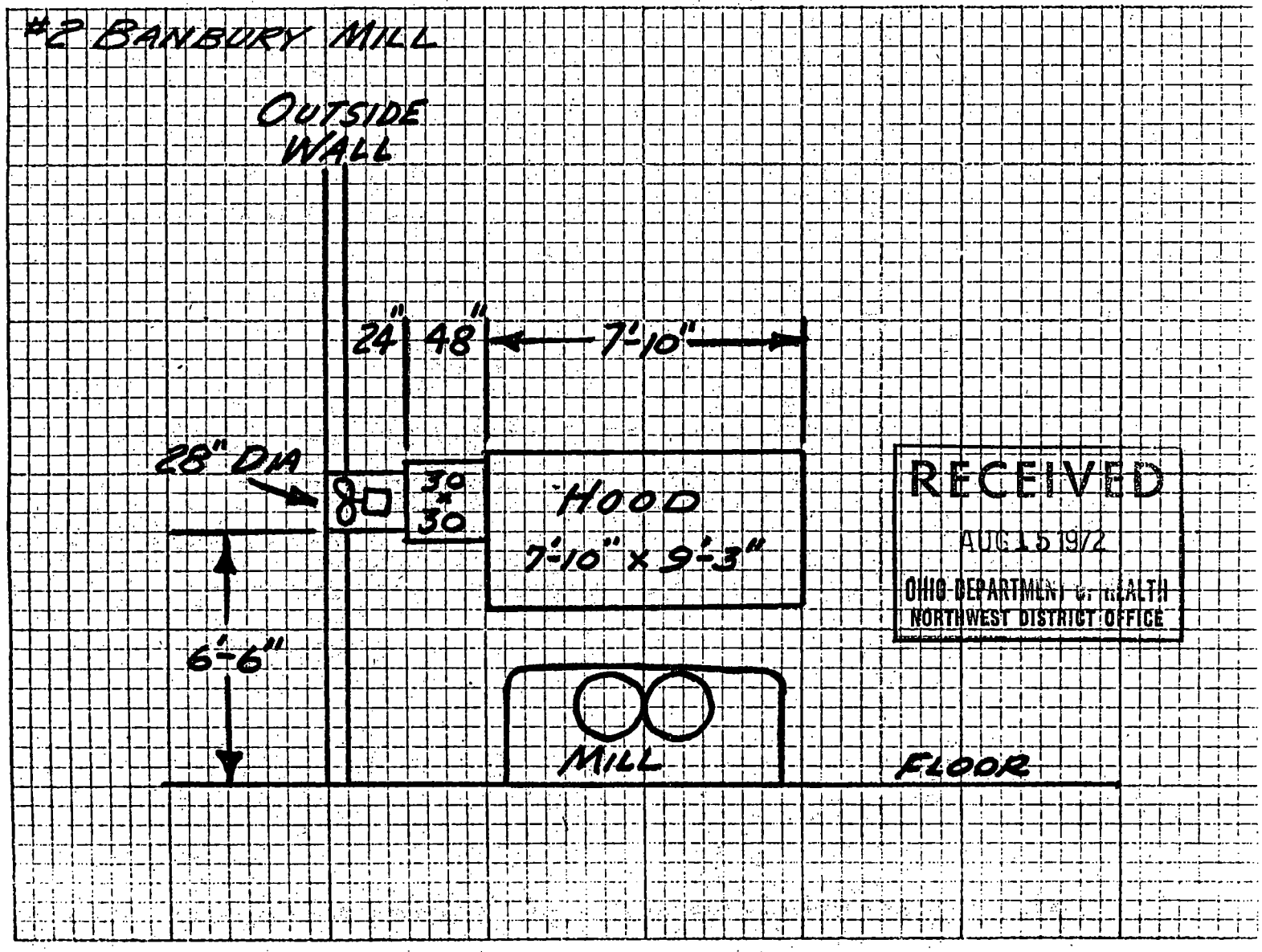
Facility Name: Swan Rubber Division of Amerace-Esna — Person to Contact: Jack McCoy

Facility Address: Beal Avenue (Street) — Mailing Address: Beal Avenue (Street)

Bucyrus (City, Village or Township) | Crawford (County) | 44820 (Zip) — Bucyrus (City) | Ohio (State) | 44820 (Zip)

Telephone: 419-562-1011 (Area Code / Number)

1. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 28" Dia.
2. Height: Above roof ——— ft. Above ground 6'-6" ft.
3. Exit gas: Temp. _____ °F. Volume _____ ACFM Velocity _____ feet per minute
4. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____
   Manufacturer _____ Make or model _____ Pollutant _____
5. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one sour or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03/17/108/0102
Source No. 5/020

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus (City, Village or Township) Crawford (County) 44820 (Zip) Bucyrus (City) Ohio (State) 44820 (Zip)

Telephone 419-562-1011 (Area Code / Number)

2. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 28" DIA.

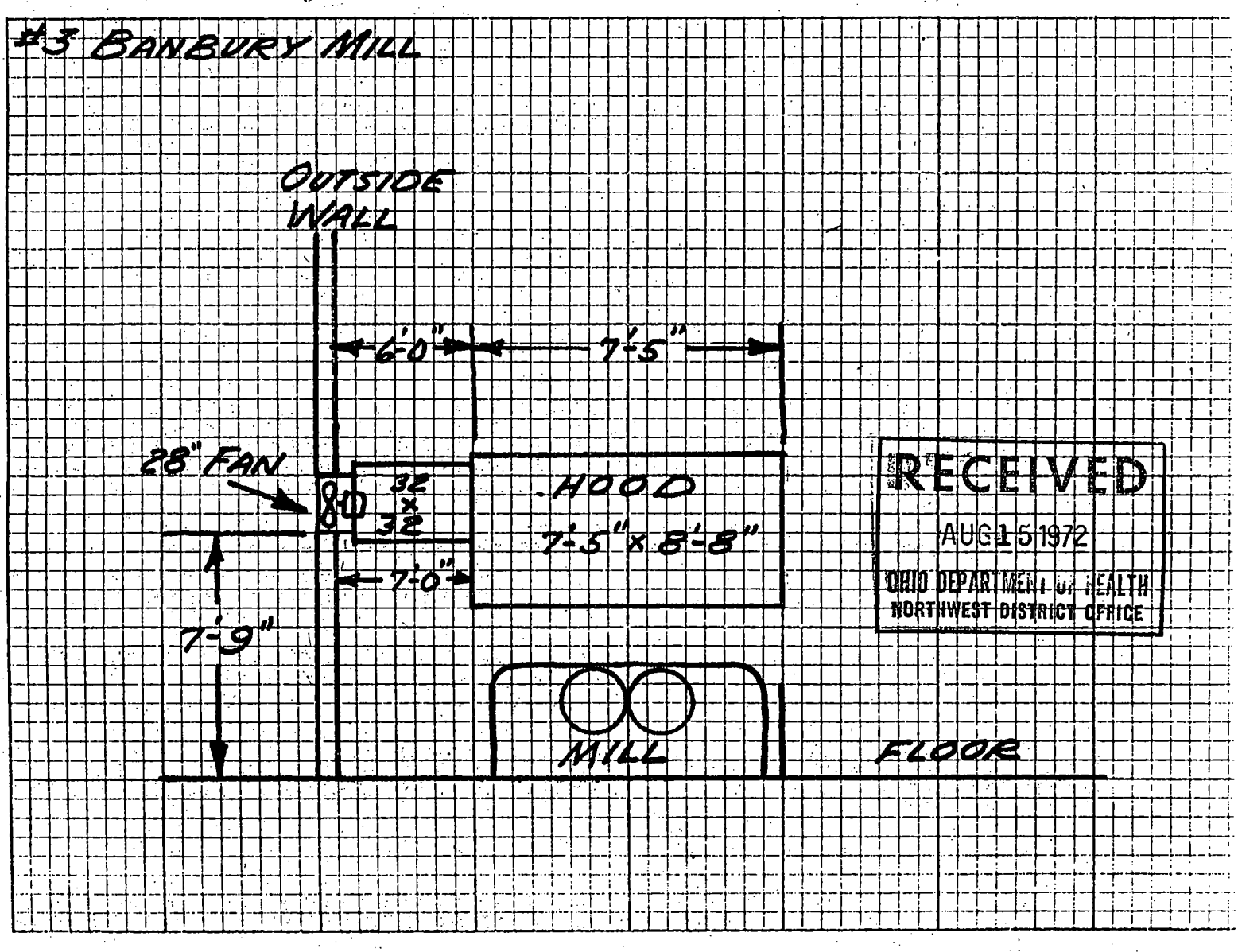
3. Height: Above roof ——— ft. Above ground 7-9" ft.

4. Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

FOR OFFICIAL USE ONLY
Premise No. 03 17 101 10102
Source No. S 1021

DATA SHEET
STACKS AND OTHER EGRESS POINTS

1. Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue (Street) Mailing Address Beal Avenue (Street)

Bucyrus | Crawford | 44820 — Bucyrus | Ohio | 44820

City, Village or Township | County | Zip — City | State | Zip

Telephone 419-562-1011 (Area Code / Number)

2. Type: ☒ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 28" DIA.

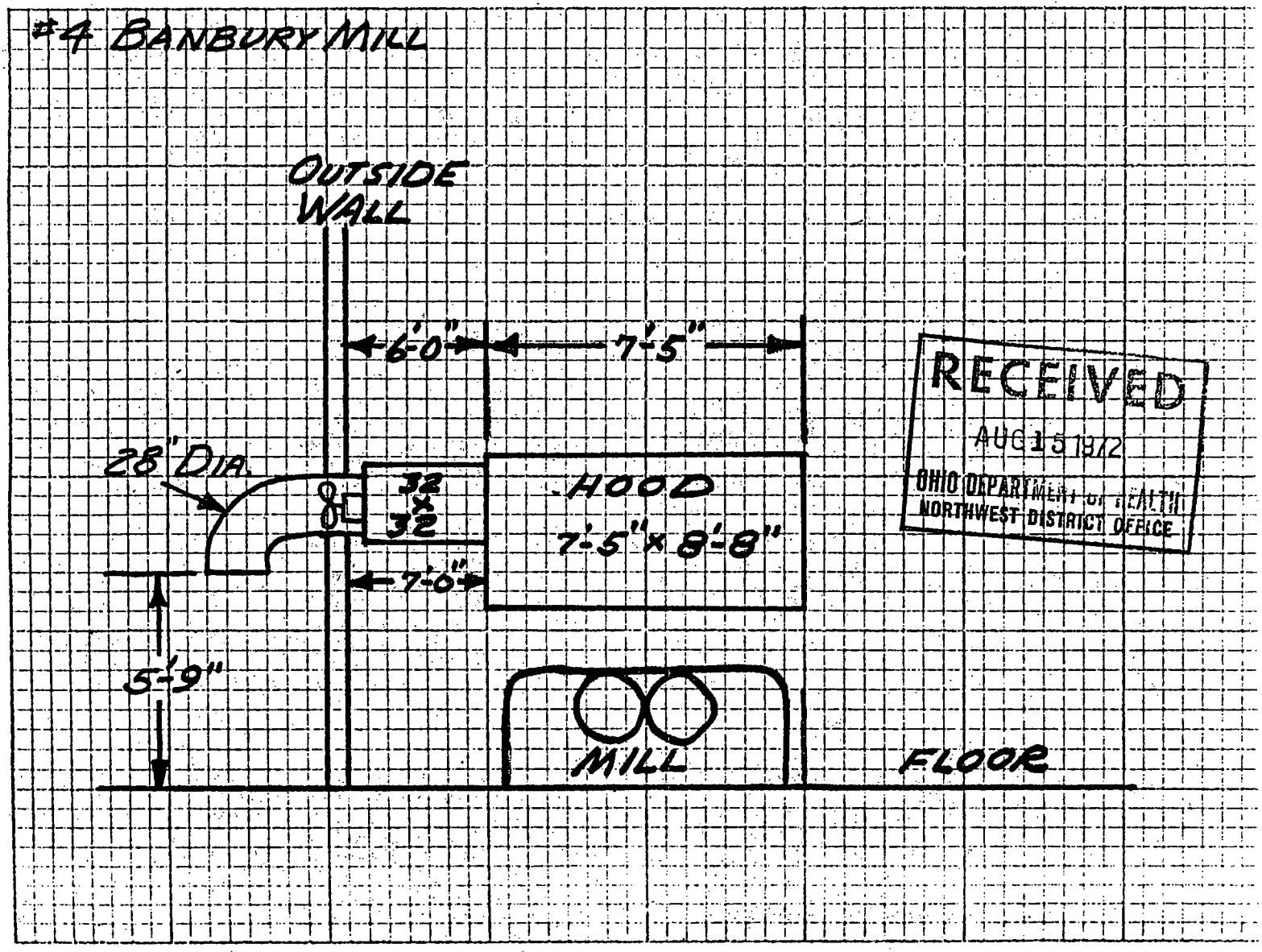
3. Height: Above roof — ft. Above ground 5'-9" ft.

4. Exit gas: Temp. ____ °F. Volume ____ ACFM Velocity ____ feet per minute

5. Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type ____

Manufacturer ____ Make or model ____ Pollutant ____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

RAW MATERIALS

BANBURY

DESCRIPTION	TOTAL	LB/HR
Thiokol FA	25,000 lb	4.340 lb/hr
Diene 35NF	70,000	12.152
Neoprene GN	430,000	74.652
W	570,000	98.958
WB	3,000	.520
WHV	44,000	7.638
WHV-100	424,000	73/611
WRT	1,400	.243
TW	1,438,000	249.652
Nitrile Med High (Hyear 1042, Chemigum N608)	263,000	45.659
Nitrile Med low Mooney paracril BJLT	25,000	4.340
Nitrile Med (Paracril BLT)	1,759,000	305.381
Nitrile vinyl blend (Paracril 020)	29,000	5.039
Liquid nitrile (Hyear 1312)	100,000	17.361
Nitrile corss linked (chemigum N-8)	16,000	2.777
Nitrile low (Paracril AJ)	16,000	2.777
Hypalon 40	282,000	48.958
Hypalon 40 HV	7,200	1.250
SBR 1006 (Polysar S-630)	104,000	18.055
SBR 1009 (6003, S-7554)	365,000	63.368
SBR 1502 (Krylene 604)	1,885,000	327.256
SBR 1512 (Kryflex 200)	92,000	15.972
SBR 1/13 (FRS 201)	132,000	22.916
SBR 1805, 3775D	574,000	99.652
SBR 8754	108,000	18.750
Tires with beads	12,750,000	2213.541
Debeaded tires	200,000	34.722

BANBURY

DESCRIPTION	TOTAL	LB/HR
CAB tire scrap	40,000 lb.	6.944 lb/hr
580 x reclaim	2,385,000	414.062
880 reclaim	675,000	117.187
460 WT reclaim	400,000	69.444
EPDM reporcessed	5,000	.868
EPT high mooney (Nordel 1070)	174,000	30.208
EPT Low mooney (Nordel 1040)	79,500	13.802
EPDM Fast cure	10,000	1.736
EPT Fast ext. (Nordel 1145)	25,000	4.340
EPDM polymer	839,000	145.659
EPDM polymer (intermediate mooney)	193,000	33.506
EPDM polymer (high green strength)	55,000	9.548
EPDM polymer (GP fast curing)	120,000	20.833
EPDM polymer (oil ext)	500,000	86.805
Polyis obutylene (off grade)	2,000	.347
Epirholopahaplrim rubber	2,000	.347
Sulfer	281,500	48.871
DTDM curing agent	1,100	.190
Peroxide curative	50	.008
Accelerator ZDMDC (Msimate)	8,020	1.392
Accelerator TDEDC (Telluroc)	25	.004
ZADBDC	2,150	.373
DPG	15,100	2.621
DPTG	400	.069
MBT (Captax, thiotax)	7,700	1.336
MBTs (Altax, thiofide)	24,400	4.236
Santocure, cydac, conacs, delae S. Durax	41,400	7.187

BANBURY

DESCRIPTION	TOTAL	LB/HR
NOBS special, amax, santocure Mor	3,500 lb.	.607
EPDM, accelerator	1,900	.329
TMTM (Thronex, Mono thiurad,cyvram)	43,550	7.560
TMTD (Tuads, tuex, SA 52-1)	34,350	5.963
DPTT masterbatch	4,500	.781
Thiourea accelerator (NA ZZ, ethylene thiourea)	4,800	.833
Tetramethyl thiourea	1,800	.312
Heavy mag oxide	26,500	4.600
Light mag oxide dispersion	46,000	7.986
Zinc oxide	595,000	103.298
Litharage	57,000	9.895
Light mag oxide	30,000	5.208
Red lead dispersion	25	.004
Retarder W	300	.052
Retarder V (Vultrol)	100	.017
Scorch regulator	6,700	1.163
Agerite gel	9,400	1.631
Flectol H. agerite resin D	25,650	4.453
Santoflex AW	5,000	.868
Pana (Neozone A)	6,350	11.102
Aminox	42,700	7.413
Antioxidant 2246 and 235	2,650	.460
Octamine,cyanox 8	50	.008
Betanox special	62,000	10.763
Akroflex CD agerite HP	1,000	.173
Wingstay 100	,000	1.041
Flexzone G-H	5,550	.963

RAW MATERIAL

BANBURY

DESCRIPTION	TOTAL	LB/HR
NBC, BTH	59,500	9.461
Navgawhite power	600	.109
Anti degradant flexzone TF	4,000	.694
Low MP paraffin, slab form	167,000	28.993
Anti-cheek wax flaked	90,600	15.729
Med. Mp paraffin - flaked	27,000	4.687
TBEP (KP 140)	3,000	.520
Butyl oleate	251,000	43.576
D O P	127,000	22.048
Lt plasticizer (Sc,4141)	396,000	68.750
Lt plasticizer (TBEA)	10,800	1.875
Heavy paraffinic oil (sunpar 2280)	171,000	29.687
Light naphthanic proc oil (shellflex 213)	48,000 gal	8.333 gal/hr
Petrolatum (21355B, protopd ZA)	105,000 lb	18.229 lb/hr
Aromatic proc oil (paraflx, 4156 D-X, Sundex 790)	30,000 gal	5.208 gal/hr.
Heavy napthenic proe oil	246,000 gal	42.708 gal/hr
Rapeseed oil	7,900 lb	1.371 lb/hr
Soapflakes	500	.086
Polyethylene glycol (carbowax 4000)	61,000	10.590
Millrex	3,800	.659
Mill release agent (Rubars)	2,800	.486
Polyethylene mill (a/c grade)	48,000	8.333
Brown rubber sub (ZL,900)	1,050	.182
Coumarac - indene resin (MH 3, R-IGA)	282,000	48.958
Targum S	14,500	2.517
MR	2,000,000	347.222
High styrene resin (2007, 8000A)	186,000	32.291

RAW MATERIAL

BANBURY

DESCRIPTION	TOTAL	LB/HR
Tachifia resin	75,000 lb	13.020 lb/hr
Hydrocarbon resin lt. color reinf.	34,000	5.902
Flame retardant solid (chlorowax 70)	9,000	1.562
Flame retardant liquid (chlorowax 40)	14,500	2.517
MT (Thermax)	5,000,000	868.055
SRF (furnex, essex, cointex, srf united 20)	3,400,000	590.277
HAF (Vulcan 3, statex R)	160,000	27.777
FRF (philblack A, statex M)	1,700,000	295.138
Hard clay	7,700,000	1336.805
Soft clay	3,000,000	520.833
Ground oyster shell (laminar, Bi-val 99)	1,037,000	180.034
Water ground cale cart (aromite)	892,000	154.861
Silica (Hl SiL 215)	24,000	4.166
Silica (Percipitated Hyd)	4,400	.763
Ground bituninous coal (Austin)	250,000	43.402
Ground whiting	7,285,000	1264.756
Red color std. shade (RT 618, 52-250)	4,500	.781
Red color dk. shade (RT 663, 19-261)	1,565	.271
Red oxide (297, 2199, 2551)	22,000	3.819
Phthalocyanine blue	600	.104
Phtylalocyanine green	6,200	1.076
Yellow iron oxide	11,150	1.935
Yellow pigment (1270)	100	.017
Tatunium dioxide	10,400	1.805
Meleic acid	450	.078

FOR OFFICIAL USE ONLY
Premise No. 03/17/01/0102
Source No. N/001

PERMIT APPLICATION
INCINERATOR

1. Facility Name: Swan Rubber Div-Amerace-Esna — Person to Contact: Jack McCoy

Facility Address: Beal Avenue (Street) — Mailing Address: Beal Avenue (Street)

Facility: Bucyrus	Crawford	44820	Mailing: Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone: Area Code ____ Number ____

2. This application is submitted for:
   - [X] Permit to operate an existing source
   - [ ] Permit to construct a new source or modify an existing source
   - [ ] Variance from regulation(s) _____ for _____ months

3. Check-list of information to accompany this application:
   - [X] Plans and drawings
   - [ ] Emission tests or calculations
   - [X] Process flow diagram
   - [ ] Compliance time schedule
   - [ ] Construction schedule
   - [ ] Additional information

4. Source of combustible waste:
   - [ ] Hospital, number of beds _____
   - [ ] Apartment, number of units _____
   - [ ] Institution, number of rooms _____
   - [X] Industrial process, describe _____
   - [ ] Other, describe _____

5. Incinerator located: [ ] Indoors [X] Outdoors [ ] Charged indoors, unit outdoors
6. Manufacturer Owner — Make or model -
7. Rated capacity _____ lb./hr. Year installed 1955 Your identification _____
8. Type of incinerator [X] Single chamber [ ] Multiple chamber
9. Method of charging waste: [ ] Chute fed [ ] Flue fed [X] Direct fed [ ] Other. If other, describe:
10. Type of draft: [XX] Forced [ ] Induced [ ] Natural [ ] Starved air [ ] Overfire air jets, capacities _____
11. If liquid incinerator, type of atomization _____
12. Type of flue damper: [ ] Barometric [ ] Butterfly [ ] Guillotine [ ] Sliding [X] None
13. Adjustable air ports: [ ] Yes [X] No
14. Burner input (BTU/hr.): Primary _____ Secondary _____
15. Secondary burner ignition: [ ] Manual (timer) [ ] Automatic (charging door switch)
16. Secondary burner temperature control: [ ] Yes Lower limit _____ °F [ ] No
17. Type of refractory: [X] Firebrick [ ] Castable Pyrometric cone equivalence _____
18. Primary chamber dimensions (inches) Length 36" Width 24" Height 24"
19. Secondary chamber dimensions (inches) Length _____ Width _____ Height _____
20. Describe provisions for combustion or tempered make-up air _____

OPERATING SCHEDULE AND AMOUNT OF WASTE INCINERATED

21. Normal operating schedule: hrs./day 4 days/wk. 5 wks/yr. 48
22. Percent annual incineration by season: Winter 25 Spring 25 Summer 25 Fall 25
23. Quantity of waste burned (lbs./hr): Average _____ Maximum _____
24. Type of waste (see instructions) Rubber, Plastic, Fiber Heat content of waste _____ BTU/lb.
25. Type of fuels used: [X] Natural gas [ ] Oil [ ] LP gas [ ] None
26. Amount of fuel used per year 134,000 cu. ft. Burner manufacturer/model Unknown
27. Type of charging: [ ] Continuous [X] Intermittent [ ] Batch
28. Percent projected annual increase in incineration None

RECEIVED
AUG 15 1972
OHIO DEPARTMENT OF HEALTH
NORTHWEST DISTRICT OFFICE

Important Notes: If emissions from this source have been determined by source tests, material balances or emission factors, include such data and supporting calculations with application.

A waste analysis must accompany all incinerator permit applications.

A detailed drawing of the incinerator showing all dimensions (inside and out) must accompany this application. Indicate position of charging doors, burners and any auxiliary equipment.

AP-PS-05

OFFICIAL USE ONLY
mise No. 03/12/01/0002
rce No. 5/017

DATA SHEET
STACKS AND OTHER EGRESS POINTS

Facility Name Swan Rubber Division of Amerace-Esna Person to Contact Jack McCoy

Facility Address Beal Avenue Mailing Address Beal Avenue

Street			Street		
Bucyrus	Crawford	44820	Bucyrus	Ohio	44820
City, Village or Township	County	Zip	City	State	Zip

Telephone 419-562-1011
Area Code Number

Type: ☐ Round ☒ Rectangular - top inside dimension(s) (L & W or Diam.) 24"x24"

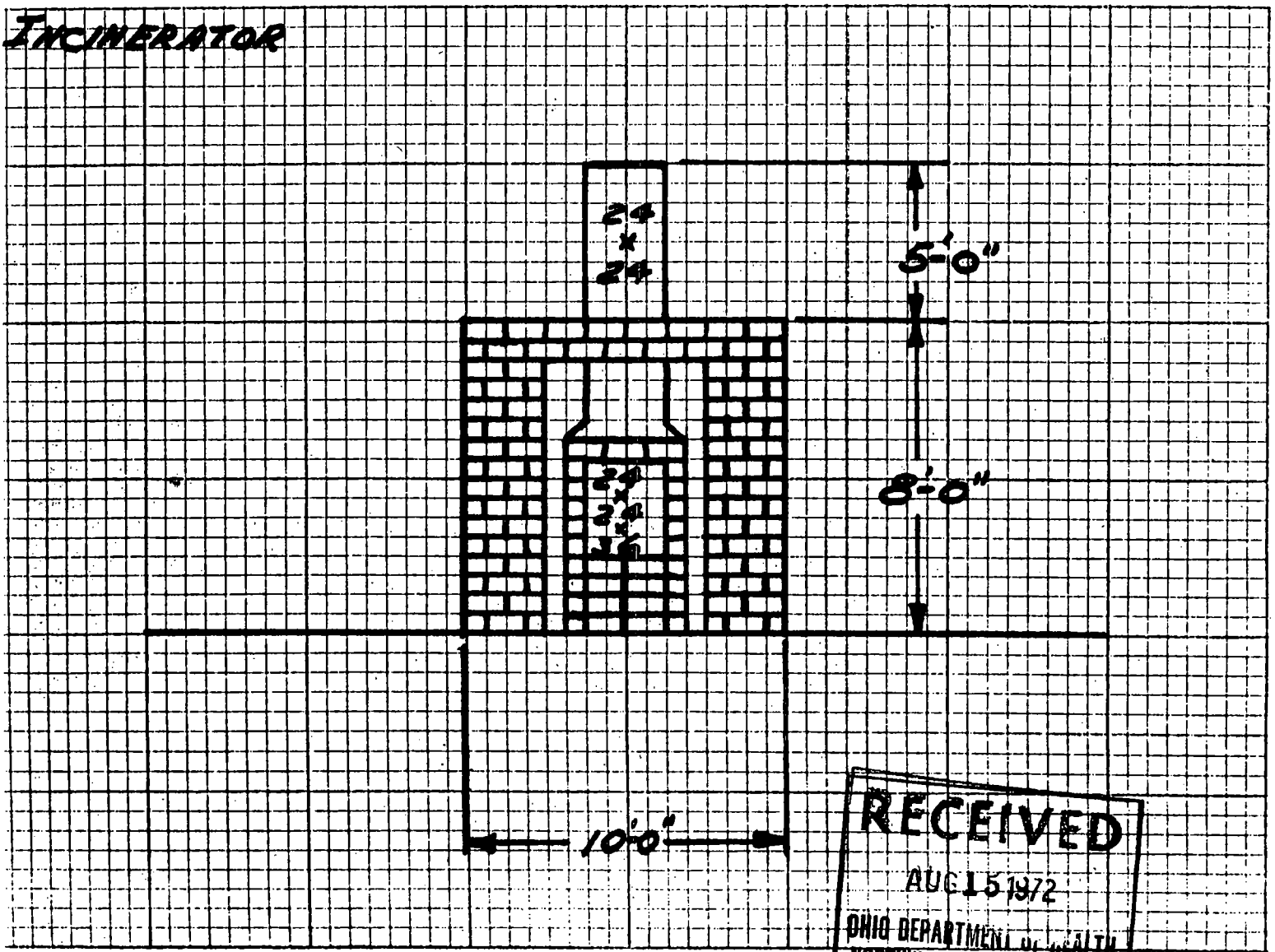
Height: Above roof 5'-0" ft. Above ground 13'-0" ft.

Exit gas: Temp. _____°F. Volume _____ ACFM Velocity _____feet per minute

Continuous monitoring equipment: ☐ Yes ☒ No. If yes, indicate: Type _____

Manufacturer _____ Make or model _____ Pollutant _____

Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections.



portant Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

CRAWFORD CO.

KNEPPER WHITE ARTER & HADDEN

180 EAST BROAD STREET, FOURTH FLOOR
COLUMBUS, OHIO 43215
(614) 221-3155
TELECOPIER (614) 221-0479

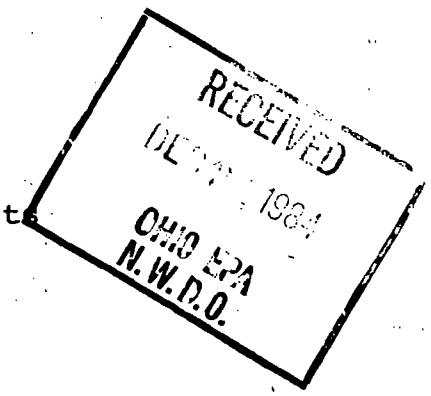
IN CLEVELAND
ARTER & HADDEN
1100 HUNTINGTON BUILDING
CLEVELAND, OHIO 44115
(216) 696-1100
TELEX 98 5384
TELECOPIER (216) 696-2645

IN WASHINGTON
ARTER & HADDEN
1919 PENNSYLVANIA AVENUE, N. W.
WASHINGTON, D. C. 20006
(202) 857-0960
TELEX 89 7422
INTL. TELEX 248526

December 19, 1984

REGISTERED MAIL --
RETURN RECEIPT REQUESTED.

Ohio Environmental Protection Agency
1035 Devlac Grove Drive
Bowling Green, Ohio 43404



Re: Change of Ownership - Air Permits
Anchor Swan Corp.
Bucyrus, Ohio

Gentlemen:

In accordance with OAC 3745-35-02(D)(2), you are hereby notified of the sale of the Anchor Swan facility located in Bucyrus, Ohio.

On November 19, 1984, Harvard Industries, Inc., a Delaware corporation entered into an agreement to purchase certain assets, which includes the Bucyrus facility, from Amerose Corporation and Anchor Swan Corporation. The exact date of closing has not yet been set, however, pursuant to the sales agreement is shall occur on or before January 4, 1985.

A number of air permits and registrations have been represented as being issued for the facility. Harvard Industries, Inc., is requesting that they be transferred to its name. Further, it realizes it will assume the responsibilities under those permits and registrations effective the date of transfer. A list of the permits and registrations is attached for your information.

Any correspondence or communications regarding this matter should be directed to my attention as their counsel.

Very truly yours,

KNEPPER, WHITE, ARTER & HADDEN

Richard P. Fahey

RPF/cjd
Attachment

Permits, Licenses, Franchises

Cyrus, Ohio Plant

Air Permits

Contact: Ohio EPA, Northwest District Office
1035 Devlac Grove Drive
Bowling Green, Ohio 43404
Telephone: (419) 352-8461
Samir Araj

State EPA, Patricia Walling
Manager A&C Section, Ohio EPA
361 Broad Street
Columbus, Ohio 43215
Telephone: (614) 466-6116

Permit No.	Source	Type	Regulation Cited
0317010102-P014*	Lead Pots & Bag House	P.T.O.	O.A.C.-3745-35
0317010102-P022	Electrostatic Spray Unit	P.T.O.	O.A.C.-3745-35
0317010102-K001	Rubber & Plastic Spiral Unit	P.T.O.	O.A.C.-3745-35
03-616	Extruder Parts Cleaner	P.T.I. P.T.O. Applied For	O.A.C.-3745-31 O.A.C.-3745-45
03-648	Electrostatic Spray Unit	P.T.I. P.T.O. Applied For	O.A.C.-3745-45
03-770	Plastic Compounding	P.T.I. P.T.O. Applied For	O.A.C.-3745-45
03-781	#3,4,5 Cyclohexanone Applicator	P.T.I. P.T.O. Applied For	O.A.C.-3745-45
03-1123	Thermoplastic Line Glue Applicator	P.T.I. P.T.O. Applied For	O.A.C.-3745-45
03-1299	Pin Cleaning Station	P.T.I. P.T.O. Applied For	O.A.C.-3745-45
03-1403	Vertical Vulcanizer	P.T.I. P.T.O. Applied For	O.A.C.-3745-45
03-1532	Fluoroelastomer Line Cyclohexanone Applicator	P.T.I. P.T.O. Applied For	O.A.C.-3745-45
03-661	PVC Bulk Handling System with Baghouse	P.T.I. P.T.O. Applied For	O.A.C.-3745-45

* Expired 8/84. Application for replacement P.T.O. has been submitted.

Permit No.	Source	Type	Regulation Cited
03-1561	Cement Applicator P.S. Hose	P.T.I.	OAC 3745-31
0317010102 -	P 001 Banbury Rubber Mills	Registration Notice Only	OAC 3745-35-05
	P 002 Plastic Cover Machine	Registration Notice Only	OAC 3745-35-05
	P 003 Reclaim Banbury Extruder	Registration Notice Only	OAC 3745-35-05
	P 006 Rubber Mix Mills-Tubers	Registration Notice Only	OAC 3745-35-05
	P 007 Plastic Ribbon Blender #3	Registration Notice Only	OAC 3745-35-05
	P 008 Plastic Reclaim Refiners	Registration Notice Only	OAC 3745-35-05
	P 009 Electrostatic Spray Unit	Registration Notice Only	OAC 3745-35-05
	P 010 Reclaim Choppers	Registration Notice Only	OAC 3745-35-05
	P 012 Rubber Buffer	Registration Notice Only	OAC 3745-35-05
	P 013 Reclaim Blender & Strainer	Registration Notice Only	OAC 3745-35-05
	P 015 Clay Bulk Handling System	Registration Notice Only	OAC 3745-35-05
	P 017 Bardol Spray Applicator	Registration Notice Only	OAC 3745-35-05
	P 019 Carbon Black System	Registration Notice Only	OAC 3745-35-05
	P 022 Electrostatic Spray Unit '74	Registration Notice Only	OAC 3745-35-05
	B 001 to B 028		
	B 030 to B-033 Boiler & Air Make Up Units	Registration Notice Only	OAC 3745-35-05

or Official Use Only

remise No. ___/___/___/____
ource No. ___/_____
pplication No. ___/_____

APPENDIX A, PROCESS

PROCESS DATA

Name of process: Rubber Hose mfg. (P.S.)

End product of this process: Cemented Braided Hose

Primary process equipment: Cement box

Your identification: P.S. Hose #1 Year Installed: 1983

Manufacturer: Anchor Swan Make or model: N/A

Capacity of equipment (lbs./hr): Rated .24 gallon/hr Max. .24 gallon/hr.

Method of exhaust ventilation: [X] Stack [ ] Window fan [ ] Roof vent
[ ] Other, describe

Are there multiple exhausts? [ ] Yes [ ] No

OPERATING DATA

Normal operating schedule: 24 hrs./day, 5 days/wk., 48 wks./year.

Percent annual production (finished units) by season:
Winter 25 Spring 25 Summer 25 Fall 25

Hourly production rates (lbs.): Average .58 gallons Maximum .58 gallons

Annual production (indicate units) 2765 gallons
Projected percent annual increase in production 10%

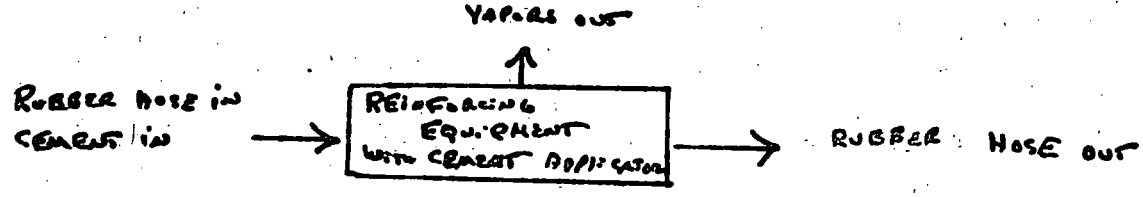
Type of operation: [X] Continuous [ ] Batch

If batch, indicate Minutes per cycle _____ Minutes between cycles _____

Materials used in process:

List of Raw Materials	Principal Use	Amount (lbs./hr.)
Neoprene rubber) 70%	by volume.	.41 gal/hr.
Toluene) 15%	Cement	.63#/hr. = .088 gal/hr.
M.E.K.) 15%		.58#/hr. = .088 gal/hr.
		1.5

A PROCESS FLOW DIAGRAM MUST BE INCLUDED WITH THIS APPENDIX. Show entry and exit points of all raw materials, intermediate products, by-products and finished products, Label all materials including airborne contaminants and other waste materials. Label the process equipment and control equipment.



CONTROL EQUIPMENT

Control Equipment Code:

(A) Settling chamber	(G) Cyclonic scrubber	(M) Adsorber
(B) Cyclone	(H) Impingement scrubber	(N) Condenser
(C) Multiple cyclone	(I) Orifice scrubber	(O) Afterburner - catalytic
(D) Electrostatic precipitator	(J) Venturi scrubber	(P) Afterburner - thermal
(E) Fabric filter	(K) Plate or tray tower	(Q) Other, describe_____
(F) Spray chamber	(L) Packed tower	_____

15. Control Equipment data:

Item	Primary Collector	Secondary Collector
(a) Type (See above code)		
(b) Manufacturer		
(c) Model No.		
(d) Year installed		
(e) Your identification		
(f) Pollutant Controlled		
(g) Controlled pollutant emission rate (if known)		
(h) Pressure drop		
(i) Design efficiency		
(j) Operating efficiency		

STACK DATA

16. Your stack identification P.S. Hose #1

17. Are other sources vented to this stack? ☐ Yes ☒ No
    If yes, identify sources_____

18. Type: ☒ Round, top inside diameter dimension 18"
    ☐ Rectangular, top inside dimensions (L)_____ x (W)_____

19. Height: Above roof 6 ft., above ground 26 ft.

20. Exit gas: Temp. Ambient °F, Volume 3000 ACFM, Velocity 1700 ft./min.

21. Continuous monitoring equipment: ☐ Yes ☒ No
    If yes, indicate: Type_____, Manufacturer_____
    Make or Model_____, Pollutant(s) monitored_____

22. Emission data: Emissions from this source have been determined and such data is included with this appendix: ☐ Yes ☒ No
    If yes, check method: ☐ Stack Test ☐ Emission factor ☐ Material balance

Completed by R. Jacobson, Date 9-14-83

NEW SOURCE REVIEW

Type Number

1) PTI Number 03-1561

2) Date Application Received 10/4/83

3) Premise Number: 0317010102

4) Start-up Date End of 1983

5) Facility Name Anchor Swan Corp / Amerace Corp.

6) Facility Location: Street Beal Ave City Bucyrus.

or Township _____ County Crawford.

7) Facility Description Rubber & Plastic Hose Manufacturing.

8) Source Cyclohexanone Applicator.

9) Control Equipment Description N/A.

10) Control Equipment Cost N/A.

11) Annual Emissions: (Attach Calculations)

Pollutant	Potential Emissions #/hr	Potential Emissions TPY	Actual Emissions #/hr	Actual Emissions TPY	Regulations Allowable Emissions #/hr	Regulations Allowable Emissions TPY	Permit Allowable Emissions #/hr	Permit Allowable Emissions TPY
Particulate	~~1.21~~	~~3.51~~	~~1.21~~	~~3.51~~	—			
Hydrocarbons	1.21	3.51	1.21	3.51	"Exempt Solvent."			
Sulfur Dioxide								
Carbon Monoxide								
Nitrogen Dioxide								
Lead								
Other								

12) Does this source have to comply with:

NESHAPS No

NSPS No

PSD No

Interopretative Ruling No

13) Recommended Status Approval.

Signature _____ Date 10/27/83

Emission Calculation.

Toluene. $.088\ gal/hr \times 7.2\ \#/gal \times \frac{Ton}{2000\ lb} =$ .00032 TPH

.63 #/hr

1.84 TPY.

MEK. $.088\ gal/hr. \times 6.6\ \#/gal \times \frac{Ton}{2000\ lb} =$ .00029 TPH

.58 #/hr

1.67 TPY.

Total Emission = .63 + .58 = 1.21 #/hr.

= 1.84 + 1.67 = 3.51 TPY.

Allowable ⟹ Exempt Solvent.

Toluene is under 20% by volume.

MEK. is Exempt.

For Official Use Only
Premise No. 03,17,01,0102
Source No. R1001
Application No. ___1_____

APPENDIX D

SURFACE COATING OR PRINTING OPERATION*

1. This appendix is submitted for a:

☒ Surface coating operation (check one below):

___ Paint spray booth ___ Flow coating
_X_ Dip tank ___ Roller coating
___ Spray Coating (Other than paint spray booth)
___ Other surface coating operation, describe_____

_____

☐ Printing or lithographic operation.

2. Name of operation Thermoplastic Hose line ; Your identification Same
Year Installed 1979

3. Is this operation succeeded by a heated drying or baking operation? ☐ Yes ☒ No
If yes, indicate operating temperature of oven_____° F.

4. Normal operating schedule: 24 hours/day, 5 days/wk., 48 wks./year.

PAINT SPRAY BOOTH N/A

5. Type of spray booth: ☐ Enclosed ☐ Conveyor ☐ Downdraft
☐ Other, describe_____

6. Booth manufacturer_____ Make or Model No._____

7. Type of spraying: ☐ Air gun ☐ Airless ☐ Electrostatic
☐ Other, describe_____

8. Spraying operation is: ☐ Manual ☐ Automatic

9. Fan manufacturer_____ Make or Model No._____

10. Booth's exhaust is equipped with: ☐ Water wash (Complete item 11)
☐ Exhaust filters (Complete item 12)
☐ Baffles
☐ Other, describe_____
☐ None

11. Water wash: (a) Is water recirculated? ☐ Yes ☐ No
(b) Is a chemical added to the water? ☐ Yes ☐ No
(c) Is material reclaimed from wash water? ☐ Yes ☐ No
(d) Describe method for disposal of waste materials._____

_____

*Does not include metal plating

12. Exhaust filters:

(a) Type of material: ☐ Fiberglas ☐ Aluminum
☐ Other, describe_____

(b) Filter size (inches): Length_____Width_____Thickness_____
No. of filters:_____ No. of filter changes: _____times per year

13. Describe material painted_____

ALL OPERATIONS (Except paint spray booth)

14. Describe type of operation Coating of Thermoplastic hose with glue to allow yarn reinforcement to adhere.

15. Describe method of coating or printing Hose is pulled through glue pot applicator.

16. Identify and describe type(s) of material coated or printed_____

ALL OPERATIONS

17. Complete the following information for each general type of surface coating or printing material. Report on the material as it is employed after the addition of any pigments, solvents, etc. If there are more than three types of materials, furnish the same data for the additional materials on a separate sheet or another appendix form.

(a) Material employed Urethane/MEK glue Density 8.0 lbs./gallon
Solids content 50 % by volume or_____% by weight 4.0
Solvent content 50 % by volume; Solvent density 6.71 lbs./gallon
Normal application schedule: 24 hrs./day, 5 days/wk., 48 wks./year.
Quantity used (gallons/hour): Normal 1 Maximum 3
(gallons/year): 2000 (est.)

Per Hose call to Dennis on 7-17-91 1 gal MEK

Complete the solvent composition by identifying each solvent component and its respective % by volume of the total solvent. (The % by volume should total to 100%).

Solvent Composition		
Solvent	% by Volume	*
Methyl Ethyl Ketone	50%	N

Solvent Composition		
Solvent	% by Volume	*

* If solvent is photochemically reactive enter "Y", if not photochemically reactive enter "N", if unknown enter "U".

Is the material photochemically reactive? ☐ Yes ☒ No ☐ Do not know

17. (b) Material employed _____ Density_____lbs./gallon
Solids content _____% by volume or_____% by weight
Solvent content _____% by volume Solvent density_____lbs./gallon
Normal application schedule:____hrs./day,____days/wk.,____wks./year.
Quantity used (gallons/hour): Normal_____Maximum_____
(gallons/year): _____

- Complete the solvent composition by identifying each solvent component and its respective % by volume of the total solvent. (The % by volume should total to 100%).

Solvent Composition		
Solvent	% by Volume	*

Solvent Composition		
Solvent	% by Volume	*

* If solvent is photochemically reactive enter "Y", if not photochemically reactive enter "N", if unknown enter "U".

Is the material photochemically reactive? ☐ Yes ☐ No ☐ Do not know

17. (c) Material employed _____ Density_____lbs./gallon
Solids content _____% by volume or_____% by weight
Solvent content _____% by volume Solvent density_____lbs./gallon
Normal application schedule:____hrs./day,____days/wk.,____wks./year.
Quantity used (gallons/hour): Normal_____Maximum_____
(gallons/year): _____

- Complete the solvent composition by identifying each solvent component and its respective % by volume of the total solvent. (The % by volume should total to 100%).

Solvent Composition		
Solvent	% by Volume	*

Solvent Composition		
Solvent	% by Volume	*

* If solvent is photochemically reactive enter "Y", if not photochemically reactive enter "N", if unknown enter "U".

Is the material photochemically reactive? ☐ Yes ☐ No ☐ Do not know

18. Identify all liquid organic cleanup materials for this process and indicate the amount used per average operating day and per year.

Cleanup Material	*	Gallons Used	
		Daily	Yearly

* If material is photochemically reactive enter "Y", if not photochemically reactive enter "N", if unknown enter "U".

19. A PROCESS FLOW DIAGRAM MUST BE INCLUDED WITH THIS APPENDIX. Show entry and exit points of all materials and finished products. Label all materials including airborne contaminants and other waste materials. Label the process equipment and control equipment.

CONTROL EQUIPMENT

20. Type of control equipment: [X] None
    - [ ] Incineration, Temp._____° F, Thermal / Catalytic (Circle one)
    - [ ] Adsorption, describe_____
    - [ ] Condensation, describe_____
    - [ ] Other, describe_____

21. Manufacturer_____ Model No._____ Year Installed_____

22. Percent collection or removal efficiency: Design_____% Operating_____%

23. For non-incineration method identify specific pollutant controlled_____

STACK DATA

24. Your stack identification Thermoplastic line glue pot exhaust

25. Are other sources vented to this stack? [ ] Yes [X] No
    If yes, identify sources_____

26. Type: [X] Round, top inside diameter dimension 12"
    [ ] Rectangular, top inside dimensions (L)_____ x (W)_____

27. Height: Above roof 5 ft., above ground 25 ft.

28. Exit gas: Temp. Ambient° F, Volume 1000 ACFM, Velocity 1200 ft./min.

29. Continuous monitoring equipment: [ ] Yes [X] No
    If yes, indicate Type_____, Manufacturer_____
    Make or Model_____, Pollutant(s) monitored_____

30. Emission data: Emissions from this source have been determined and such data is included with this appendix: [ ] Yes [ ] No
    If yes, check method: [ ] Stack Test [ ] Emission factor [ ] Material balance

Completed by R. J. Jacobson, Date 6/19/81

12. Thermoplastic hose

13. Methyl Ethyl Ketone vapors

14. Methyl Ethyl Ketone vapors

15. Exhaust Ventilation

16. N/A

17. N/A

18. No effect on environment anticipated.

19. None

20. None

21. Yes. To the best of our knowledge

22. Yes. To the best of our knowledge

23. N/A

24. N/A

25. No

NEW SOURCE REVIEW

1) PTI Number 03-1123

2) Date Application Received 7-6-81

3) Premise Number 0317010102

4) Start-up Date UNKNOWN

5) Facility Name GOOD HOSE DIVISION

6) Facility Location: STREET REAL AVE. CITY BUCYRUS

OR TOWNSHIP _____ COUNTY CRAWFORD

7) Facility Description HOSE MFG.

8) Source BLUE APPLICATOR FOR REINFORCING THERMOPLASTIC HOSE

9) Control Equipment Description NONE

10) Control Equipment Cost N.A

11) Annual Emissions: (Attach Calculations)

POLLUTANT	POTENTIAL EMISSIONS	ACTUAL EMISSIONS	REGULATIONS ALLOWABLE EMISSIONS	PERMIT ALLOWABLE EMISSIONS
Particulate				
Hydrocarbons	SEE REVERSE SIDE		EXEMPT	EXEMPT UNDER 3745-21-07 (9)(F)
Sulfur Dioxide				
Carbon Monoxide				
Nitrogen Dioxide				
Lead				
Other				

12) Does this source have to comply with: N.A.

NESHAPS _____
NSPS _____
PREVENTION OF SIGNIFICANT DETERIORATION _____
INTERPRETATIVE RULING _____

13) Recommended Status REGISTRATION

Signature Don Watterson Date 7-20-81

ACTUAL
+
POTENTIAL EMISSIONS:

MAX - 3 GAL/HR x 4.0 LB/GAL x 24 HR/day = 288 LB/day
NORMAL - 1 GAL/HR x 4.0 " x 24 " = 96 LB/day

MAX. YEARLY USAGE ≈ 2000 GAL x 4.0 LB/GAL = 8.000 LB/YR = 4 TPY

"THIS OPERATION IS INTERMITTENT & ALTHOUGH IT HAS THE POTENTIAL OF EMITTING ≈ 288 LB/day, THE YEARLY USAGE OF GLUE IS ONLY ABOUT 2000 GAL. SOLVENT EMPLOYED IS MEK - EXEMPT